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PUBLIC WORKS APPROPRIATIONS FOR 1961

THURSDAY, APRIL 7, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to call, in room 1223, Senate Office Building, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Chairman Hayden.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENT BY THE CHAIRMAN

Chairman HAYDEN. The committee will come to order.

This morning this subcommittee, which is a subcommittee of the Public Works Subcommittee, will begin its consideration of funds for the Bureau of Reclamation, the Bonneville Power Administration, the Southeastern Power Administration, and the Southwestern Power Administration for the fiscal year ending June 30, 1961.

For the current fiscal year $290,389,875 was appropriated for the programs and activities of these agencies. The budget estimates for fiscal year 1961 total $334,384,000 for these programs and activities. This amount reflects a reduction of $10 million in the original requests in accordance with an amendment to the budget submitted in House Document No. 356. I will include in the record the letter of the Director of the Bureau of the Budget to the President explaining this amendment to the budget.

(The letter referred to follows:)

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., March 4, 1960.

The PRESIDENT,
The White House.

SIR: I have the honor to submit herewith for your consideration amendments to the budget, for the fiscal year 1961, for the Department of the Interior, involving reductions totaling $10 million, as follows:

DEPARTMENT OF THE INTERIOR

Budget page	Heading	Original estimate	Revised estimate	Decrease
	BONNEVILLE POWER ADMINISTRATION			
648	Construction	$20,220,000	$18,720,000	$1,500,000
	BUREAU OF RECLAMATION			
681	Upper Colorado River Basin fund	71,600,000	63,100,000	8,500,000

The reduction for the Bonneville Power Administration results from the use of currently available equipment for installation at new facilities and the deferral of certain large transformer installations.

At the time the 1961 budget was submitted to the Congress it was not possible to accurately estimate the effect on funding requirements of a labor-management dispute which stopped construction for a 6-month period at the Bureau of Reclamation Glen Canyon unit of the Colorado River storage project. The Department of the Interior advises that, on the basis of recent detailed information, a reduction of $8,500,000 can be made in 1961 funds for the Glen Canyon unit.

I recommend that the foregoing amendments to the budget for the fiscal year 1961 be transmitted to the Congress.

Respectfully yours,

MAURICE H. STANS,
Director of the Bureau of the Budget.

SUMMARY TABLES

Chairman HAYDEN. I will also include in the record committee tables Nos. 1, 2, and 3, which give the details of the various appropriation requests.

(The tables referred to follow:)

PUBLIC WORKS APPROPRIATION BILL, FISCAL YEAR 1961

TABLE 1.—*Bureau of Reclamation and Department of the Interior power marketing agencies*

Appropriation	Appropriation, 1960	Transfers and supplementals, 1960	Total, 1960	Budget estimate, 1961
BUREAU OF RECLAMATION				
General investigations:				
Engineering and economic investigations	$4,708,018		$4,708,018	$4,367,447
Advanced planning	183,065		183,065	
Investigations of existing projects	40,492		40,492	39,000
Alaskan investigations	252,877		252,877	250,000
Transfer to Fish and Wildlife Service	195,000		195,000	200,000
Less:				
Service charges and unobligated carryover, advances, etc	−711,000		−711,000	206,447
Total	4,668,992		4,468,992	4,650,000
General investigations (foreign currency program)				4,957,000
Construction and rehabilitation. (See table 2 for details.)	132,466,171		132,466,171	173,950,000
Operation and maintenance	28,402,725	$735,000	29,137,725	31,900,000
Loan program:				
Administration	214,500		214,500	220,075
Loans	5,866,087	5,147,000	11,013,087	18,216,925
Total	6,080,587	5,147,000	11,227,587	18,437,000
General administrative expenses:				
Commissioner's offices	2,478,400		2,478,400	2,508,000
Regional offices	1,811,600		1,811,600	1,812,000
Total	4,290,000		4,290,000	4,320,000
Upper Colorado River Basin fund. (See table 3 for details.)	74,459,775		74,459,775	63,100,000
Boulder City municipal fund [1]				(150,000)
Disposal of Coulee Dam community [1]				(15,000)
Total, Bureau of Reclamation	250,368,250	5,882,000	256,250,250	301,314,000

TABLE 1.—*Bureau of Reclamation and Department of the Interior power marketing agencies*—Continued

Appropriation	Appropriation, 1960	Transfers and supplementals, 1960	Total, 1960	Budget estimate, 1961
BONNEVILLE POWER ADMINISTRATION				
Construction:				
Construction in progress	$12,120,124	−$195,000	$11,925,124	$12,239,000
New construction	8,707,000		8,707,000	6,117,000
General plant	631,000		631,000	786,000
Less prior year funds	−430,124		−430,124	422,000
Plus funds for use in succeeding year	422,000		422,000	
Total	21,450,000	−195,000	21,255,000	18,720,000
Operation and maintenance:				
System operation and maintenance	8,962,750	+195,000	9,157,750	9,670,000
Power contracts and rates	323,000		323,000	325,000
General administration	903,000		903,000	980,000
Total	10,188,750	+195,000	10,383,750	10,975,000
Total, Bonneville Power Administration	31,443,750		31,443,750	29,695,000
SOUTHEASTERN POWER ADMINISTRATION				
Operation and maintenance:				
System operation and maintenance	80,000		80,000	80,000
Purchase of energy and wheeling charges	455,625		455,625	539,000
Power contracts and rates	96,000		96,000	96,000
General administration	85,000		85,000	85,000
Total	716,625		716,625	800,000
SOUTHWESTERN POWER ADMINISTRATION				
Construction:				
Construction in progress	285,725		285,725	
New construction and additions	858,000		858,000	1,325,000
Less prior year funds available	−285,725		−285,725	
Total	858,000		858,000	1,325,000
Operation and maintenance:				
System operation and maintenance	731,000		731,000	800,000
Power contracts and rates	88,000		88,000	100,000
General administration	302,250		302,250	350,000
Total	1,121,250		1,121,250	1,250,000
Continuing fund: [1]				
Purchase of energy and wheeling charges	*4,092,000*		*4,092,000*	*4,114,000*
Rental of transmission facilities	*908,000*		*908,000*	*886,000*
Emergency expenses	*45,000*		*45,000*	
Total	*5,045,000*		*5,045,000*	*5,000,000*
Total, Southwestern Power Administration	1,979,250		1,979,250	2,575,000
Grand total	284,507,875	5,882,000	290,389,875	334,384,000

[1] Appropriation of receipts are not included in totals of this tabulation.

TABLE 2.—*Bureau of Reclamation—Construction and rehabilitation*

Project and State	Appropriation, fiscal year 1960	Supplemental, fiscal year 1960	Total, fiscal year 1960	Estimate, fiscal year 1961	House allowance, fiscal year 1961	Restoration requested, fiscal year 1961
Advance planning	[1] ($183,605)		[1] ($183,605)	$254,000		
Gila project, Arizona	3,304,305		3,304,305	4,219,000		
Colorado River front work and levee system, Arizona-California	370,500		370,500	769,500		
Boulder Canyon project, Arizona-Nevada	2,754,375		2,754,375	2,857,000		
Central Valley project, California	40,373,554		40,373,554	61,306,100		
Collbran project, Colorado	4,295,730		4,295,730	5,140,000		
Minidoka project, north side pumping division, Idaho	797,550		797,550	429,000		
Palisades project, Burns Creek Dam and powerplant, Idaho	487,500		487,500			
Washoe project, Nevada-California	678,750		678,750	3,137,000		
McMillan Delta project, New Mexico	29,250		29,250	100,000		
Middle Rio Grande project, New Mexico	1,316,250		1,316,250	1,729,000		
Washita Basin project, Oklahoma	9,289,304		9,289,304	6,960,000		
Crooked River project, Oregon	2,684,175		2,684,175	2,235,000		
Rogue River Basin project, Talent division, Oregon	2,367,093		2,367,093	2,450,000		
Vale project, Bully Creek extension, Oregon				173,000		
Klamath project, Oregon-California	508,950		508,950	868,000		
Lower Rio Grande rehabilitation project, La Feria division, Texas				500,000		
Lower Rio Grande rehabilitation project, Mercedes division, Texas	1,394,250		1,394,250	2,500,000		
San Angelo project, Texas	3,657,611		3,657,611	11,000,000		
Provo River project, Utah	518,700		518,700	825,000		
Weber Basin project, Utah	4,961,190		4,961,190	8,283,000		
Chief Joseph project, Greater Wenatchee division, Washington	414,375		414,375	2,000,000		
Columbia Basin project, Washington	7,427,705		7,427,705	6,100,000		
Drainage and minor construction	2,821,511		2,821,511	921,120		
Rehabilitation and betterment	3,412,500		3,412,500	3,609,000		
Missouri River Basin project:						
Ainsworth unit, Nebraska				1,500,000		
Almena unit, Kansas				1,000,000		
Bostwick division, Nebraska-Kansas	2,147,925		2,147,925	821,000		
Cedar Bluff unit, Kansas	331,500		331,500	1,400,000		
East Bench unit, Montana	300,000		300,000	2,800,000		
Farwell unit, Nebraska	2,778,750		2,778,750	7,700,000		
Frenchman Cambridge division, Nebraska	4,009,134		4,009,134	5,439,000		
Glendo unit, Wyoming	1,571,300		1,571,300	775,280		
Helena Valley unit, Montana	2,029,950		2,029,950	565,000		
Owl Creek unit, Wyoming	982,663		982,663	455,000		
Transmission division, various	16,635,684		16,635,684	24,415,000		
Webster unit, Kansas	2,793,375		2,793,375	617,000		
Yellowtail unit, Montana-Wyoming				2,500,000		
Drainage and minor construction	567,450		567,450	598,000		
Investigations						

Drainage and minor construction	567,450		567,450	598,000		
Investigations	775,000		775,000	656,000		
Advance planning	1,053,125		1,053,125	1,344,000		
Subtotal, Missouri River Basin, Bureau of Reclamation	35,975,856		35,975,856	52,885,280		
Other Department of the Interior agencies	2,625,187		2,625,187	3,000,000		
Total, Missouri River Basin	38,601,043		38,601,043	55,585,280		
Subtotal, construction and rehabilitation	132,466,171		132,466,171	183,950,000		
Undistributed reduction based on anticipated delays				−10,000,000		
Total, construction and rehabilitation	132,466,171		132,466,171	173,950,000		

[1] $183,605 financed from the "General investigations funds" in fiscal year 1960.

TABLE 3.—*Bureau of Reclamation—Upper Colorado River Basin fund*

Project and State	Appropriation, fiscal year 1960	Supplemental, fiscal year 1960	Total, fiscal year 1960	Estimate, fiscal year 1961	House allowance, fiscal year 1961	Restoration requested, fiscal year 1961
Colorado River storage projects:						
Curecanti unit, Colorado				$1,400,000		
Flaming Gorge unit, Utah-Wyoming	$12,675,000		$12,675,000	12,000,000		
Glen Canyon unit, Arizona-Utah	43,736,075		43,736,075	27,035,000		
Navajo unit, Colorado-New Mexico	9,696,375		9,696,375	11,776,000		
Transmission division	702,000		702,000	518,000		
Participating projects:						
Central Utah project, Vernal unit, Utah	1,950,000		1,950,000	2,189,000		
Florida project, Colorado				750,000		
Hammond project, New Mexico	292,500		292,500	1,300,000		
Paonia project, Colorado	3,105,375		3,105,375	903,000		
Seedskadee project, Wyoming	1,154,400		1,154,400	5,000,000		
Smith Fork project, Wyoming	350,500		350,500	1,500,000		
Advance planning	797,550		797,550	938,000		
Undistributed reduction based on anticipated savings and slippage				−2,209,000		
Total	74,459,775		74,459,775	63,100,000		

COMMITTEE PROCEDURE

Chairman HAYDEN. The subcommittee will follow a little different procedure during these hearings. In previous years we have not been able to hear public witnesses when they are in Washington to appear before the House Subcommittee on Public Works. However, we will be able to do so this year. Officials from the Department will appear at a later date.

Today we will hear from a number of witnesses who are interested in the Missouri River Basin project. Senator Curtis, you are our first witness and you may proceed at this time.

MISSOURI RIVER BASIN PROJECT

STATEMENT OF HON. CARL T. CURTIS, A U.S. SENATOR FROM THE STATE OF NEBRASKA

GENERAL STATEMENT

Senator CURTIS. I want to thank the chairman very much for not only the courtesy extended to me, but to all of the Nebraska witnesses.

As I understand it, Mr. Chairman, is it correct that this morning you have under consideration the Bureau of Reclamation projects only?

Chairman HAYDEN. That is right.

Senator CURTIS. And not those of the Army or Agriculture?

Chairman HAYDEN. No. Senator Ellender looks after those.

Senator CURTIS. Now, I want to appear generally for the State of Nebraska. I want to extend our thanks for the past consideration of our development out there.

Many of our projects, in fact I think most all of them, have an element of flood control in them, even though they are under the Bureau of Reclamation.

We have a constant flood problem, and within the last month Nebraska has been again visited by floods.

Chairman HAYDEN. They have been disasters, really?

Senator CURTIS. Yes.

Now, while the floods this time came in the eastern part of the State to a great extent, these western Nebraska projects do have their effect on it. We are very grateful for the consideration that has been given us in the past.

Of the reclamation projects in Nebraska, they all have budget approval. For the most part, in fact almost entirely, they are projects that are underway. And of course the economical thing would be to continue on.

There is one project that is in a little different category. That is the Ainsworth project. They were delayed because of some matters. They made an appearance over on the House side a few days ago. Their witnesses were unable to remain.

PREPARED STATEMENT

The Ainsworth witnesses have delivered a statement to the clerk of this committee, which we would like to have made a part of the record.

Chairman HAYDEN. That will be done.
(The statement referred to follows:)

STATEMENT OF WILLIAM C. SMITH, JR.

My name is William C. Smith, Jr. I am an attorney with offices at Ainsworth, Nebr. I am now, and, since the organization of the Ainsworth Irrigation District, have been their attorney. I appear here on behalf of that district and on behalf of those interested in irrigation in north central Nebraska.

The Ainsworth project is a part of the Missouri Basin plan, made explicitly so by Public Law 612 in the 83d Congress, and has been authorized for construction by Public Law 531 in the 84th Congress, after proving its feasibility both economically and physically. This project has been under study for some time and is a part of an overall plan for the Missouri Basin development. Year before last we received our first appropriation of $1,100,000 for the purpose of detailed plans, the access road from Valentine to the damsite, and surveys, and the starting of construction at the damsite. Last year we were not granted an appropriation because of our being in litigation.

The district entered into a repayment contract with the Federal Government as of September 12, 1956, consistent with the estimates of repayment capacity as recommended by the Bureau of the Budget in their letter to the Department of the Interior dated January 26, 1956. We have passed every test required, and we have had the wholehearted support of the National Reclamation Association, the Missouri Valley Association, the Nebraska Reclamation Association, and the Niobrara River Basin Development Association, and the Governors of our States. Our project is a relatively small project and is one of the eight authorized projects in the Missouri River Basin, and of these eight projects, we have the best cost-benefit ratio. We have less nonreimbursables on our project than any other project in the Missouri River Basin and our repayment contract provides that we will not produce surplus crops under the Anderson amendment.

We will utilize the water from the Snake River, originating within the State of Nebraska, which now flows unused to the Gulf of Mexico, and while it is true that we have had some opposition claiming diversion, I wish to point out that the Department of the Interior will not commit any money to contracts for construction until the appeal from the confirmation of the organization of the irrigation district and approval of the contract between the district and the United States has been settled in our Supreme Court and the water rights firmed up. The water rights hearing was before the board of water resources on July 22, 1959, and were granted; opponents then appealed from this. The water rights and the case appealed by our opponents was consolidated before the Court and all questions will be settled once and for all. However, I can truthfully say that if it is ever decided that we have a diversion question, there are 10 other projects in Nebraska that are already irrigating with surface waters that will be unable to irrigate in the future. The attorney general of our State on December 27, 1954, has ruled that we do not have a diversion question. Our opposition attempted to get our water rights dismissed in 1955 before the department of water resources, and the department declined to do so. I should explain that you cannot ask for your water rights to be finally approved until the project will actually be in construction within 6 months, and so we were not in a position to ask for approval of these water rights until there were funds available and we should know definitely that construction on the dam itself would start within 6 months. When our decision is handed down, we must be in construction within 6 months or we will lose our water rights, so the money must be made available this year.

Our area has less annual rainfall than any other areas in Nebraska which are building projects under the Missouri Basin plan, but we do have good soil. I wish further to point out to this committee that many people claim that we could irrigate this area by pumps. This is not true, and we have excluded from our district practically all the land where good wells can be obtained. The Geological Survey Water Supply Paper 1371, on page 46, points out that south of U.S. Highway 20, which is outside of our district, irrigation wells may be only 100 feet deep because of the water-bearing deposits which are highly permeable. However, in much of the area north of U.S. Highway 20, which is in our district, the pleistocene deposits are above the water table, and if irrigation wells are to be installed they must tap the water-bearing beds of the

underlying Ogallala formation. Thus, the pumping of sufficient water for irrigation in the northern part of the Ainsworth table is economically far less than feasible than in the southern part because the depth to water is greater and the water-bearing materials are less permeable. This Department went on to say that there is adequate water to irrigate all of the irrigable land in this part of the Ainsworth table land not proposed for irrigation from the canal.

The report on the Ainsworth unit by the Acting Secretary of the Interior, Document 331 on page 48, states that results of the ground-water studies indicate that sufficient ground water is not available at reasonable depths to provide an economical supply of irrigation water by pumping from wells for all of the irrigable lands included in the Ainsworth unit. Small units along the southern fringe of the project lands can be irrigated profitably from wells. Actually, there were 7,625 acres of land excluded from this district resulting in 33,960 acres being left in the district, for the above reasons.

All of these matters were brought out in detail before the Interior and Insular Affairs Committee at the time they approved our project both economically and physically.

What concerns the people of this area further is the number of young people who are leaving our county and going to other agricultural areas where they have the advantages of irrigation. We lost 800 in population between 1940 and 1950, and most of this loss came from the farm area. Our area does not depend upon industry, but depends solely upon agriculture for our economy. Our State and local taxes have risen greatly and we need a more stable economy to help meet this burden, and the Federal Government will benefit by way of increased revenue from income taxes from this area. It is a recognized fact that irrigation areas more than repay their cost by increased income tax revenue.

We merely want to continue to build this project on the same basis that other irrigation projects are built, and the cost of our project is less per acre than any other project now in construction and being proposed to be built in Nebraska. Our cost per acre is well within the national average of projects. Some people, in figuring the cost of a project, figure interest, but the reclamation law does not provide for that.

We feel that it is necessary to utilize our water resources to the fullest, and that the reclamation program must move forward year by year in a systematic way. We are not in a position to do this job by ourselves, but with the help of the Federal Government to invest in this very worthwhile project, it will more than repay every dollar through out repayment contract, the earnings in power on the Missouri River, and increased income taxes, and will give to an area which now has a very unstable economy, a stable economy.

In 1955, 1956, and again in 1959 we suffered droughts. During the week of June 13 through June 17, 1959, a new poll was taken in the district and 216 owners within the district reaffirmed and asked the Congressmen to support appropriations. This was 12 more than actually voted in support of the project at the time the project was organized.

I can't stress too much that what opposition we have had has been sponsored by ranchers outside the district, which has been very vocal and well financed; and that any funds that are allowed us by the Congress will not be committed to firm or primary contracts until our present litigation in the Supreme Court of Nebraska is disposed of. Our cases were argued to the supreme court on December 8, 1959, and we have been expecting the decision to be handed down for the past 2 weeks. Most assuredly it will be handed down prior to the time this committee completes its hearings, and you will be immediately notified of the decision. We have won every round in the courts and there is no reason that we should not win this one.

We feel that water is a natural resource that should not be a political football, because it is good for the people not only of the State of Nebraska but for the entire Nation. It is a very dangerous precedent to start a project such as this one, giving us appropriations of $1,100,000 year before last, and then last year cutting us off after we, as a district, had committed ourselves to considerable expenditures. This type of thing has not been done in the past in the 17 Western States, and Congress has twice authorized our project as to feasibility, both economically and physically. Attached hereto is a sheet showing the Ainsworth project is the most feasible project in the State of Nebraska, with less nonreimbursables than any other project.

It is therefore imperative that if reclamation is going to move forward in a systematic way, this project should receive at least $1½ million this coming year.

(NOTE.—The following telegram was received prior to printing, and is included in the record at the direction of the chairman.)

ST. LOUIS, MO., *April 8, 1960.*

HON. CARL HAYDEN,
Chairman, Subcommittee on Public Works Appropriations,
Senate Office Building, Washington, D.C.:

Nebraska Supreme Court handed down the two decisions in favor of the Ainsworth Irrigation District today. Our contract and formation of district were approved in first case and our water rights were approved and granted in second case. This resolves all litigation in district's favor. We need only appropriations of Congress this year to go forward. We must be in construction within 6 months from this date under Nebraska law. We ask that this telegram be inserted in the record in both House and Senate Appropriations Committees.

WM. C. SMITH,
Attorney for Ainsworth Irrigation District.

PREPARED STATEMENT

Senator CURTIS. And then, without reprinting, we would like to have their appearance on the House side considered here by reference, because there may have been some questions asked over there that would be helpful.

Chairman HAYDEN. Those House proceedings will be considered as a part of this record.

RED WILLOW DAM

Senator CURTIS. On my left here is Mr. M. O. Ryan, executive director of the Republican Valley Conservation Association. He will speak primarily for the Frenchman-Cambridge district, and the matter that they have of importance is the Red Willow Dam that is underway and is budgeted. The work at Bostwick is underway and Farwell is underway and budgeted.

Mr. Ryan has spent considerable time in Nebraska working on this, and he has continued to represent the association here in Washington.

I believe, Mr. Chairman, unless there are any questions, that I shall not take any more of your time, because our case is well established by the Bureau of the Budget and the Bureau of Reclamation.

Chairman HAYDEN. All right, Mr. Ryan.

REPUBLICAN VALLEY CONSERVATION ASSOCIATION

STATEMENT OF M. O. RYAN, NATIONAL COUNSELOR

PREPARED STATEMENT

Mr. RYAN. Good morning, Senator.

May I place in the record, please, two 1-page statements of officers of our groups, out in southwestern Nebraska, who were unable to be here, sir?

Chairman HAYDEN. That may be done.

(The information referred to follows:)

STATEMENT OF HARRY D. STRUNK

Mr. Chairman and gentlemen of the committee, on behalf of the Republican Valley Conservation Association representing southwestern Nebraska, northwestern Kansas, and northeastern Colorado, I appreciate this opportunity to lay

before you, in as few words as possible, some of the facts which may guide your committee in your decision as to appropriations and a continuation of the program which this association is responsible for, and has carried through during the last quarter century, primarily the control of floodwaters and the utilization of these waters upon the land, as well as other potentialities such as conservation of the soil and recreational development and resources.

This organization has appeared before various congressional committees in the past, and through this period of time the Federal Government has seen fit to expend millions of dollars in the construction of dams, reservoirs, canals, laterals, and drainage works.

But, this program today is merely in its infancy. Attesting to that fact is the condition which exists right now, not only in the Republican Valley, but throughout the entire State of Nebraska and other States where we find a flood condition that is taking hundreds and hundreds of millions of dollars to repair, and leaving the land and the country in much worse condition than it was. Had it not been for the several reservoirs which were built and controlled the larger part of this runoff water, this damage would have been multiplied by much more.

As I said in the beginning, we do appreciate what your committee and the Congress of this Nation have done to try to prevent such catastrophies and to make our resources sound and economical for future generations.

We sincerely hope that your committee will see fit to grant the appropriations that are necessary to continue construction and completion of this entire program, and at this time especially, Red Willow Dam.

STATEMENT OF DON THOMPSON

Mr. Chairman and gentlemen of the committee, as Secretary of the Republican Valley Conservation Association and a Nebraska State senator, formerly a director of the Frenchman-Cambridge Irrigation District, I sincerely hope that this committee will grant the appropriations necessary to carry on the construction of Red Willow Dam.

The Frenchman-Cambridge Irrigation District has been organized since 1946 and is now in operation, but its total works cannot be completed until Red Willow Dam and canals and laterals are constructed. Red Willow Dam is very vital to the water supply of the district and for flood protection to existing project works already completed, for which the landowners have contractual repayment obligations to the U.S. Government.

We are gratified that Congress has seen the need for this important work and certainly will not fail to continue appropriating money that eventually will come back to the U.S. Treasury when all project works are completed in the Republican Valley watershed.

FRENCHMAN-CAMBRIDGE DISTRICT PROJECT

Mr. RYAN. And then, as Senator Curtis says, our case primarily is one of expressing the hope that the Bureau of the Budget recommendations will be sustained. We do have about a $5 million allocation to finish certain parts of the Frenchman-Cambridge district project.

That has been organized since 1946. So we are delighted that it continues to move along rapidly, because many of those folks have waited a long time.

That does include beginning on the Red Willow project, which your committee generously approved last year.

ALMENA, KANS., PROJECT

We are also hopeful that you may see fit to grant the initial construction funds for Almena.

The Budget Bureau has recommended just $1 million. That is a project in Kansas, but the flood benefits and some of the irrigation benefits are on the Nebraska side.

We are hopeful, too, that the investigational money recommended by the Bureau of the Budget may be sustained, because it is with those funds that the Bureau continues to seek out deserving projects which were authorized under the 1944 act.

May I just pass this map up, not to appear in the record, sir, but to give an indication what a fine network of projects has been constructed up in that area. And may I tell you, sir, that, as the Senator said a minute ago, in spite of the heavy snow and rains that have visited sections of the Great Plains this year, and the disastrous floods which have been experienced in many places, all of those reservoirs held, and there has been no serious flooding in that area.

Chairman HAYDEN. Well, that is a very fine record.

STABILIZATION OF RESOURCES

Mr. RYAN. It is. We are beginning to witness the stabilization of the water and soil resources of that section for all time.

We are indeed grateful to your committee for your continued sympathy and interest in that program through the years. We do just make one other point, and it is this. This came about probably as a byproduct of the development of that area. But as late as 1950, Senator, there was no single body of water in southwestern Nebraska that would sustain fish life even during the year.

Our people had to go into northern Nebraska, or into Colorado, to find a lake or a river. Today, in those reservoirs, there is fish life, the wildlife has returned, forestation has been stepped up.

So there is a very important element of recreational benefits there that flows from these projects.

Chairman HAYDEN. A number of people fail to appreciate that.

Mr. RYAN. We do feel in a way that the Bureau might properly be given a little additional funds of a reimbursable character, just to make a beginning on the recreational benefits, when they leave a reservoir area.

MAINTENANCE OF PROJECTS

Our people are willing to undertake the maintenance of those projects once they are built. But the Bureau, I think, might properly, and they are willing and able to do so, if they have some modest nonreimbursable sums to lay out the first pier, and to chart the area for subsequent development. But it remade our whole area.

Chairman HAYDEN. There must be access to these reservoir areas, and minimum safety and public use facilities provided.

Mr. RYAN. That is right. And the Bureau could do that better than our local people. Because they are all eager to develop their end of these reservoirs first, of course.

We thank you, Mr. Chairman, for this opportunity to appear before you again.

Chairman HAYDEN. You are very welcome.

PREPARED STATEMENT

(The prepared statement of M. O. Ryan follows:)

STATEMENT OF M. O. RYAN

Mr. Chairman and gentlemen of the committee, I am M. O. Ryan, national counselor, Republican Valley Conservation Association. This organization was

formed in McCook, Nebr., in 1940, and represents the entire watershed of the upper Republican, in southwestern Nebraska and adjoining sections of Colorado and Kansas. Speaking for our association, let me thank you for this opportunity to make a brief statement.

Throughout the Great Plains, extremely heavy flood damage is being sustained right now. This comes from unusually heavy rainfall, and from rapidly melting snowbanks. Highways and even railroad rights-of-way are being inundated and damaged. Homes and business structures and other personal property is sustaining grave flood damage throughout much of that area. But, gentlemen, it is significant that in the upper Republican Valley, where a network of dams and reservoirs has already been constructed, no grave damage has been sustained as yet. The reservoirs are full of spring runoff, but they have held, and minimized the downstream loss of livestock and personal property of every kind.

This map, to which I call the attention of the committee members, reveals there are only 4 or 5 small dams to be constructed, after which the water and soil resources of our watershed will be completely stabilized for all time. That is the dream toward which our people have been working, and I do want you to know that the foresight of your committee in making possible the great progress that has come since 1950 is responsible for the remarkable development of southwestern Nebraska, and contiguous areas in Colorado and Kansas.

FRENCHMAN-CAMBRIDGE

It has been heartening to us to note that the Bureau of the Budget has approved a rather substantial allocation of funds with which to continue the work on the Frenchman-Cambridge Irrigation District. The sums recommended total $5,439,000, including those which are earmarked for the inauguration of construction of Red Willow Dam and Reservoir, and canal, totaling $2,910,747. May I stress once again that this Red Willow Creek is one of the most frequent flood offenders in our whole basin, and the main body of lands in the Frenchman-Cambridge district lies right in the path of any floods which might come sweeping down that stream. We do earneslty hope, therefore, that your committee will approve this level of funds, for it will make possible a reasonably prompt beginning on this extremely important project. Any serious delay in construction would threaten the entire investment in the great irrigation project below the confluence of the Red Willow and the Republican streams.

ALMENA PROJECT

We are likewise extremely eager to see a beginning made on this project, at a damsite adjoining the town of Norton, Kans. While the major features would be located in Kansas, flood protection would be afforded to some Nebraska areas, and the undue sedimentation in the Harlan County Reservoir would be immediately reduced. This project has three great features commending it to our people. First, it would relieve them of the perennial flood threat which they have experienced over a long period of years. Even though the stream carries only a modest annual runoff, I understand that $8,500,000 of the cost of this unit has been assigned to flood control. This alone reveals the damaging character of high water periods in that river. Second, we do have need for supplemental irrigation water almost every fall, in spite of the fact that the spring and summer months may witness flood periods. So the storage of this floodwater, which can subsequently be employed for irrigation purposes, will help to stabilize for all time the agriculture of that area. Third, this project will furnish a municipal water supply for the town of Norton. We believe that this is rated as the highest of all priorities on the water uses from western streams, so we do hope that it will have the sympathetic attention of your committee, to the end that the $1 million of initial construction money, which has been approved by the Bureau of the Budget, will be appropriated. We have been told that the people of the area already have organized an irrigation district. Meanwhile, the city of Norton has already taken the necessary legal steps to guarantee the purchase of water from the reservoir for human consumption.

UNDERFINANCING

We are concerned, gentlemen, over the device initiated by the Bureau of the Budget whereby underfinancing frequently occurs on certain projects. We go along entirely with the philosophy that it is futile for the Bureau of Reclama-

tion to keep idle funds on hand in excess of those moneys which they can expend during any fiscal year. And yet it would be a tragedy if, on Almena project, for instance, the residents of that area were subjected to underfinancing, when the initial allocation of funds is so modest. To prevent a slowdown in construction on any project, which would increase the unit cost, or delay the completion of the project, might it not be possible to limit the underfinancing to 5 percent of the approved appropriation, so that there would be little danger of interference with the schedule of approved work? If some plausible method can be found to prevent damaging delays in work schedules, it would prove reassuring to the residents of the 17 Western States.

INVESTIGATIONAL FUNDS

Here again, we are led to to believe that the funds set up for the Missouri Basin, covering advance planning and general investigations, totaling $2 million, is adequate. We do earnestly feel, however, Mr. Chairman, that in our area, these two types of activity should be maintained at the highest practical level. After all, the Federal Government has made a very substantial investment in areas like ours, where the program of work is well along, and every delay impairs the usefulness of existing projects. We do respectfully urge, therefore, that barring some reason not known to us, this $2 million be approved for the fiscal year 1961.

RECREATIONAL BENEFITS

One of the unexpected byproducts of the multiple-purpose projects which have been built in our valley has been the immense stimulation of recreational activities. Up until 1950 there was no fresh water lake, nor extensive section of our rivers, where year-round fish life could be sustained. Wildlife had deserted the area. The closest boating, swimming, or aquatic activities of any kind were in the Platt River to the north of us, or out in the foothills of the Rocky Mountains. But today recreation is a very great factor in the economy of southwestern Nebraska and contiguous areas in Colorado and Kansas. The reservoir sites have proven a great attraction for tens of thousands of people. It has meant the sale of boats, of lumber and supplies for construction of cabins, and has meant the sale of fishing tackle, of hunting equipment, and various other products employed in recreational pursuits. This has not only strengthened the real estate values of our area, and provided further job opportunities, but has brought great sociological benefits to our people.

We understand, however, that full development and improvement of these recreational areas is now a difficult problem because the Bureau of Reclamation has been limited in the expenditures which it can make to those required for minimum facilities needed to protect the health and safety of the visiting public, unless it can be shown that the additional facilities are of national significance. We respectfully suggest that some thoroughgoing study be made, perhaps under the auspices of your committee, to see if the public interest might not justify enactment of legislation which would give a little wider latitude of action to the Bureau of Reclamation in its improvement of reservoir sites on a nonreimbursable basis. I believe that a thorough study would reveal that the people of these areas would be willing to set up some new political subdivision, similar to our irrigation and soil conservation districts, where the local interests could carry on, once the minimum improvements have been made, to take full advantage of the recreational opportunities in the vicinity of the reservoir. At the moment, under existing legislation, there is a rather long period when the development of these recreational projects is impossible for want of just a little capital and statutory authority. I suggest that it would be appropriate to even allocate, on a nonreimbursable basis, a portion of the cost of the reservoir and other joint works, to enable the recreational benefits to be created.

Once again, gentlemen, speaking for our group in southwestern Nebraska and adjoining sections of Kansas and Colorado, may I express our deep gratitude for your generosity in permitting our construction program to move along as fast as it has.

FLOOD PROTECTION FOR KANSAS CITY AREA

Senator CURTIS. I think, Mr. Chairman, that is all of our witnesses.

Again, let me at this point say that I urge the favorable consideration of these projects that are budgeted They are all underway.

The witnesses have been here before. We are not burdening the committee with long discussions that repeat what we have said before.

May I say in reference to the Republican Valley particularly, the Frenchman-Cambridge, and the Bostwick area, not only has flood control been a factor all the way through, so far as our area is concerned, but those dams have contributed materially, and have been so recognized by the Army Engineers, as contributing materially to the flood protection in the Kansas City area, which has suffered so much recently.

But Bostwick and Farwell are not making an appearance here. Their work is underway. And their story has been laid before the committee.

Airsworth, the provision has been made for them to get their statements in.

I would like to urge the budget approved appropriation for the power line from Pine Bluff, Wyo., to Sidney, Nebr. This should be completed.

Thank you very much.

Chairman HAYDEN. We thank you for your appearance.

We will now hear from Senator Schoeppel.

ARKANSAS PROJECTS

STATEMENT OF HON. ANDREW F. SCHOEPPEL, A U.S. SENATOR FROM THE STATE OF KANSAS

PREPARED STATEMENTS

Senator SCHOEPPEL. Chairman Hayden, I want you to know I do appreciate the courtesies which you have extended in scheduling this hearing in order that my folks from Kansas might have an opportunity to testify on the various reclamation projects in Kansas. Unfortunately some of the interested parties had to return to Kansas and with your permission I would like to file with this committee the statement of Mr. Gerald D. VanPelt, president of the Solomon Valley Flood Control Association, Beloit, Kans., in support of the Glen Elder Dam; the statement of Keith G. Sebelius, Norton, Kans., in support of the Norton Dam, Almena unit; a resolution favoring the immediate construction of the Norton Dam and signed by the officials of the governing body of the cities of Norton and Almena and by representatives of the chambers of commerce of those two cities; a statement by Preston Gwaltney, of Norton, Kans., who is a member of the water and conservation committee of the chamber of commerce and who is interested in the Norton Reservoir, Almena unit.

Chairman HAYDEN. Yes, we had expected to hear them. As you suggest, the matter can be adjusted in that way without any difficulty at all.

Senator SCHOEPPEL. Thank you very much.

BIG CREEK PROJECT

I do urge this committee to give favorable consideration to the recommendations which have been made by the Bureau of the Budget with respect to projects in Kansas. There is one other project which

I am interested in, namely, the Big Creek project. I would like very much if this committee would appropriate $50,000 to carry on investigation work with respect to this project.

Mr. Chairman, there has been controversy with respect to the Glen Elder project and some shifting of position, and in order that the record may be clear, I ask that a telegram sent to me by the Solomon Valley Citizens Association and a wire sent to me by the county commissioners of Mitchell County, Kans., also be inserted into the record.

Furthermore, Mr. Chairman, some time ago I asked the Department of Interior to submit to me a status report on the Glen Elder and Almena units and to also answer a number of questions which I submitted with respect to the Glen Elder project. At this point I would like to make this information a part of the record.

Chairman HAYDEN. That will be done.

Senator SCHOEPPEL. In closing, may I again express my appreciation. I know that this committee will give every consideration not only to the budget requests but to the additional requests I have made.

Chairman HAYDEN. Thank you.

(The information referred to follows:)

MISSOURI RIVER BASIN PROJECTS

GLEN ELDER UNIT, KANSAS

By letters of August 18, 1958, copies of the reconnaissance report of the Bureau of Reclamation on the Glen Elder unit were transmitted to the members of the Kansas congressional delegation. That report outlined the proposed plan for the unit and demonstrated that it would probably be feasible and justifiable. Since that time, the Bureau has proceeded with the more detailed studies of the unit which the reconnaissance report indicated were warranted and needed. Those investigations, under the normal program, would continue until fiscal year 1963, at which time a definite plan report on the entire unit would be prepared.

More recently, however, local interests have been urging the Bureau to prepare its definite plan report on the Glen Elder Dam and Reservoir separately from the irrigation facilities. This was desired in order that the substantial flood protection which would be afforded by the reservoir might be realized several years earlier than under the normal schedule. Upon the recommendation of the regional director at Denver, the Commissioner of Reclamation approved this plan, and the field activities are now being concentrated upon the collection of the data needed to prepare a definite plan report on Glen Elder Dam and Reservoir only.

Glen Elder Reservoir will be one of the key storage units in the comprehensive plan for flood protection of the Solomon and Kansas River basins. These basins are subject to extensive damage from floods, as demonstrated by the July 1951 flood which caused approximately $16 million in damages in the Solomon River Valley alone. In early April of this year the streams in this area were again at flood stage.

The Corps of Engineers has calculated that a reservoir at the Glen Elder site with a capacity of 722,000 acre-feet is required to contain the design flood. They calculated also that such capacity operated for flood control would result in annual benefits of $1,205,900.

The Bureau's studies indicate that such flood control benefits alone are sufficient to justify construction of Glen Elder Dam. These benefits capitalized will support a construction cost of $43,600,000. The estimate of the cost of the Glen Elder Dam and Reservoir, including conservative space for the proposed irrigation development, and for potential municipal and industrial water use, is $42 million.

There is little doubt that beneficial use can be made all the economically storageable flow of the Solomon River at the Glen Elder site. In common with the general situation of other streams arising in the high plains, the limiting factor to irrigation development in the Solomon River Valley is water, not land. Lands which are capable of favorable production under irrigation far exceed the water supply that can be developed at this site. The problem, therefore, is one of select-

ing the best land for service. In addition to the use of conservation storage for irrigation, the city of Beloit has asked that the plans include provisions for supplying it with municipal water. Other valley towns also have need for supplemental municipal water supplies.

The revised schedule for the studies of the Glen Elder unit anticipate that a definite plan report on Glen Elder Dam and Reservoir will be completed before the end of fiscal year 1961. If construction funds were available, in fiscal year 1961, in the approximate amount of $500,000, the necessary construction designs and specifications could be prepared, preconstruction activities at the site could be started, and progress could be made on such prerequisites to construction as right-of-way acquisition and camp, road, and building layout. The first actual construction contract could be awarded before the end of the year. Presuming such an expedited schedule was adopted, initiation of construction on Glen Elder Dam would be expedited by 4 or 5 years over the normal schedule.

ALMENA UNIT, KANSAS

The Almena unit is located in north-central Kansas along the Prairie Dog Creek in Norton and Phillips Counties. The unit consists of a multipurpose dam and reservoir of 136,700 acre-feet capacity, a diversion dam, and a system of canals and laterals to serve 5,350 acres. In addition, the unit will provide municipal water for the city of Norton as well as substantial benefits from flood control, fish and wildlife conservation, and additional recreational opportunities.

The Almena unit is located in a typically Great Plains area with hot summers and extremely variable rainfall. Over a 62-year period Norton County has received an average annual rainfall of 20.8 inches, but that precipitation has varied from 11 to 33 inches. During 12 of the 26 years, from 1930 to 1956, less than 12 inches of rainfall was received. Twice during this period there were periods of 4 or more consecutive years when the rainfall during the growing season was less than 12 inches per year. This is far from adequate for the types of crops grown in the Almena area. As a result, low crop yields are quite common and complete crop failures occur frequently. Since the economy of Norton County is based almost entirely on agriculture, it is dependent upon the whims of nature and fluctuates with the rainfall. Irrigation is urgently needed to eliminate the instability and insecurity of the present economy.

The value of irrigation is widely recognized in the area and there is strong local support for the development. This is attested to by the fact that the Almena Irrigation District has been formed and a repayment contract was signed with the district on March 7, 1958. A contract with the city of Norton also was executed that same day covering the municipal water supply aspect of the development.

Prairie Dog Creek, on which Norton Dam and Reservoir will be located, has long been known for its periodic floods, the most recent of which occurred in 1953. These floods have caused extensive damage to crops, farms, and communities in the area. Norton Reservoir would eliminate the flood threat along Prairie Dog Creek. Based on studies by the Corps of Engineers, it is estimated the flood control benefits that would accrue from construction of Norton Dam would amount to $260,700 annually.

GLEN ELDER UNIT, KANSAS

Question. I note that according to the budget material before us, the report on the Glen Elder unit is not scheduled to be completed until fiscal year 1963. Is Not Glen Elder one of the key elements of the flood control plans for the Solomon River Basin?

Answer. Yes, sir. The Solomon River is noted for frequent floods which cause extensive damage to towns, utilities, and crops in the Solomon Valley. The flood of 1951 alone caused over $16 million damage in the valley. Glen Elder Reservoir, when operated in conjunction with Kirwin and Webster Reservoirs, would eliminate the greater part of this flood threat and, since Glen Elder Reservoir would have nearly twice the capacity contained in the other two reservoirs, it is the key element in the flood control plans for the Solomon Valley.

Question. Has agreement been reached with the Corps of Engineers on the flood control storage capacity required in Glen Elder Reservoir and the benefits associated therewith?

Answer. Yes, sir. The Corps of Engineers has made studies of the flood control requirements at Glen Elder and has concluded that 722,000 acre-feet of capacity would be required. The corps has assigned annual flood control benefits of $1,205,900 to the dam on that basis.

Question. To what extent would those benefits justify constructing Glen Elder Dam and Reservoir for flood control initially with necessary provision for construction of the irrigation facilities at a later date after detailed plans have been developed for that phase of the unit?

Answer. Our studies indicate that flood control benefits alone are sufficient to justify construction of Glen Elder Dam. Net annual flood control benefits as computed by the Corps of Engineers, will support a construction cost of $43,600,000. Our estimate of the cost of the Glen Elder Dam and Reservoir, including conservation space for the proposed irrigation development is $42 million.

Question. Is it not reasonable to assume that if the dam and reservoir were constructed initially for flood control eventual use will be made of all the economically storable flow of the Solomon River at the Glen Elder site?

Answer. Yes, sir. In common with the general situation of streams arising in the high plains, the limiting factor to irrigation development is water, not land. Lands in the Solomon Valley, which are capable of favorable response to irrigation, far exceed the water supply that can be developed by the dam and reservoir. The problem is not one of finding enough land, but one of selecting the best. In addition, the city of Beloit and other valley towns have need for water to supplement existing municipal supplies.

Question. How many years' delay in start of construction of Glen Elder Dam would be incurred if, before you request construction funds, you were to complete all detailed studies and plans for the irrigation service area, effect organization of water users, and negotiate contracts for repayment of the specific irrigation facilities?

Answer. About 4 or 5 years.

Question. If Congress were to decide this urgently needed flood control should not await finalization of the plans for irrigation, is your planning work sufficiently advanced that construction of Glen Elder Dam and Reservoir could be started in fiscal year 1961?

Answer. Yes, sir. If construction funds were made available for that purpose, it would be possible to expedite the planning on the dam and reservoir, prepare the designs and specifications, and award the initial contract late in fiscal year 1961.

Question. How large an appropriation would be required for that purpose?

Answer. It would require an appropriation of about $500,000.

BELOIT, KANS., *April 6, 1960.*

Hon. ANDREW SCHOEPPEL,
Senate Office Building, Washington, D.C.:

Gerald Van Pelt testified that board approved Glen Elder Dam and this is their statement: "Regarding statement of Gerald Van Pelt, that county commissions of Mitchell County, Kans., has joined in request for appropriation on Glen Elder Dam project, be advised that said board of county commissioners has never approved or disapproved said project or any request for appropriations therefor."

HAL JOHNSON, *Chairman.*
ED SCHOEN, *Member.*
JOHN PROHASKA, *Member.*

BELOIT, KANS., *April 7, 1960.*

Hon. ANDREW SCHOEPPEL,
Senate Office Building, Washington, D.C.:

Our organization sent 26 protest telegrams from Cawker, Glen Elder, Beloit, Solomon Rapids, Asherville, and Simpson protesting any money being allowed for Glen Elder Dam, besides hundreds of letters to Representative Cannon. Gerald Van Pelt's statement before the House Appropriations Committee that Glen Elder Dam is key unit for Kansas City flood protection is false. Kansas Water News of September-October 1959 figures show that 88 percent of the annual flow comes from rivers east of the junction at Junction City, only 12 percent from rivers west, which include the Smoky Hill, Republican, Salina, and Solomon. Neither did Van Pelt represent Mitchell County Commissioners nor

Beloit City Council. They have never committed themselves one way or the other so he falsified the facts and we request his report be stricken from the records.

SOLOMON VALLEY CITIZENS ASSOCIATION,
LOUISE DOOLEY, *Secretary.*

SOLOMON VALLEY FLOOD CONTROL AND
WATER CONSERVATION ASSOCIATION,
Beloit, Kans., March 29, 1960.

To Whom It May Concern:

The Glen Elder Dam has been authorized as part of the flood control system for the Kansas River and Missouri River Basin for 15 years. It is a key unit in the protection of this big and important area. Without this unit the Kaw Valley and Kansas City can be subjected to flooding that would equal the disastrous 1951 flood and its millions of property loss. At the time of this writing the Solomon River, upon which the Glen Elder unit would be located, is flooding badly due to the melting of heavy snow. It is within 9 feet of the 1951 crest.

It is urgent that this unit be started under construction this year. Every year it is delayed adds to the total flood damage. The Corps of Engineers estimates this loss to average $1 million each year.

We request an appropriation of $1 million in the 1960–61 budget to start construction this year.

The Bureau of Reclamation has sufficiently completed its planning and design of the dam and can now begin construction. In order that the Bureau can keep its program of construction on a steady year-to-year basis, the unit should be started now.

The city of Beloit has no available source of water except the Solomon River. In time of drought the river will stop flowing. The city has spent approximately $50,000 trying to find an alternative supply all with negative results. It is imperative this situation be changed. Building the dam is the only solution for this big problem.

Records show that periods of flood are followed by periods of drought. The floodwater would be impounded at the Glen Elder Reservoir, and thereby made available for irrigation and domestic use during the period of severe shortage of rainfall. The storage of this water is extremely necessary to maintain the economy of this region at a satisfactory level.

The following organizations are urging immediate construction. The statements they submitted last year are hereby reaffirmed.

Solomon Valley Flood Control Association.
Mayor and City Council of Beloit.
Mitchell County Commissioners.
Governing Body of City of Glasco.
Beloit Chamber of Commerce.
Minneapolis Chamber of Commerce.
Glasco Chamber of Commerce.

GERALD D. VAN PELT,
President, Solomon Valley Flood Control Association.

STATEMENT OF KEITH G. SEBELIUS

Mr. Chairman and members of the committee, my name is Keith G. Sebelius, and I was born on the banks of Prairie Dog Creek, and have lived in western Kansas continuously, except for education and military service, all my life. I am making this statement concerning the water needs and problems of Prairie Dog Creek as city attorney of Norton and Almena, Kans., as attorney for Almena Irrigation District No. 5; chairman of the Norton Chamber of Commerce Water Conservation Committee; director of the Republican Valley Conservation Association, and of the Mo-Ark Basins Association.

Prairie Dog Creek starts in the flat prairie land of Thomas County in western Kansas and runs in a northeasterly direction for approximately 120 miles. The eastern three-fourths is quite rolling. The runoff is rapid and produces excessive flooding in the middle and lower valley.

The valley has four needs: Flood control, municipal water for the city of Norton, reclamation for a stable agricultural area, and recreation.

FLOOD CONTROL

In 1953 the flooding of Prairie Dog Creek took our highway and railroad bridges on both sides of Norton. A survey that was certified by the Corps of Engineers showed a total damage from this one flood alone for utilities, highways, railroads, crops, and farm and town property of $2,282,263.85. The 1951 flood damage to the county road system alone in bridges, culverts, and fills was $165,000, or more than $20 for every man, woman, and child in the county.

The need for control of this stream has been apparent for many years and it was confirmed again the week before last when melting snow sent the stream over its banks and roaring down the valley, again bringing destruction and damage to the valley.

MUNICIPAL WATER FOR CITY OF NORTON

The city of Norton, Kans., is a town of 3,500 people. It has done everything in its power to improve its water supply but it has dwindled and the city has had water rationing in 4 of the past 6 years. There have been many occasions when the pressure was so low that the stools could not be flushed in the hospital and fire hydrants in the north part of town had no water.

The city of Norton entered into a repayment contract with the U.S. Government in March of 1958 to receive 1,600 acre-feet of water per year from Norton Reservoir.

RECLAMATION

Almena project of the Bureau of Reclamation was authorized by the Congress in 1944. It was found feasible in 1957. Almena Irrigation District No. 5 entered into a repayment contract with the U.S. Government in March of 1958 and the contract has been approved by the district court for a year and a half. The project will not only provide water for over 5,500 acres of land but will afford stabilization to the area agriculture by assuring to the farmer feed and grain in the dry years.

RECREATION

The closest body of water upon which to go boating is 45 miles away. The need to hold some water for recreational use cannot be overemphasized. It is a must in these rapidly changing times. The need was never greater to keep some of the rain where it fell, for fishing, boating, swimming, and hunting.

In conclusion, gentlemen, our need is great and urgent. We ask that the committee appropriate the $1 million included in the budget for Almena project.

RESOLUTION

Whereas the Almena unit (Kansas) of the Bureau of Reclamation has been ready for construction funds for 3 years; and

Whereas the farmers in Almena Irrigation District No. 5, have already paid 2 years' taxes to pay organizational expenses and will soon be paying a third year; and

Whereas periodic floods and droughts are the persistent enemy of all farmland in the valley and there is a great need for a stabilized and dependable source of feed in the area for the dry years; and

Whereas the city of Norton, Norton County, Kans., is situated on Prairie Dog Creek, and has a large investment in a city park, sewerage disposal plant, fairgrounds, football stadium, waterworks, and powerplant, that are located on the first and second bottoms of the creek and subject to floodwaters; and

Whereas said properties along with others in the valley have suffered very serious flooding and damage, including a flood just a week ago caused by melting snow; and

Whereas the city of Norton has suffered and will continue to suffer chronic water shortages and rationing in spite of continued efforts to obtain more water; and

Whereas the city of Norton and Almena Irrigation District No. 5 entered into repayment contracts with the Bureau of Reclamation of the U.S. Government over a year ago, on March 7, 1958, and the city has made long-range plans which include said water in the contract: Now, therefore, be it

Resolved by the following organizations, That they individually go on record as favoring the immediate construction of Norton Dam, and that copies of this be given to the appropriate committees and Federal agencies in Washington, D.C.

ALMENA IRRIGATION DISTRICT No. 5,
CLARENCE COX, *President.*
EARL CAPSTICK, *Secretary.*
GOVERNING BODY OF THE CITY OF NORTON, KANS.,
L. J. MOREHEAD, *Mayor.*

Attest:

WINIFRED HAMILTON,
City Clerk.

GOVERNING BODY OF THE CITY OF ALMENA, KANS.,
L. J. ACHUKMAN, *Mayor.*

Attest:

M. A. BURNETT,
City Clerk.

NORTON LIONS CLUB,
Dr. REX F. KEENER, *President.*
R. J. SPRENKLE, *Secretary.*
ALMENA CHAMBER OF COMMERCE,
FRED W. CHANDLER, *President.*
RAYMOND R. KENT, *Secretary.*
NORTON CHAMBER OF COMMERCE,
DON D. WARD, *President.*
M. D. CATLETT, *Secretary.*

STATEMENT OF PRESTON GWALTNEY

Mr. Chairman, my name is Preston Gwaltney, of Norton, Kans. I am a member of the water and conservation committee of the Norton Chamber of Commerce. I have come to Washington from western Kansas to urge you to appropriate $1 million to start Norton Reservoir, a part of Almena project of the Bureau of Reclamation.

Within the past 10 days we have seen the valley again torn up with floodwater, but oddly enough, this time it was from melting snow. I rode with the Kansas highway patrol and observed firsthand the havoc that the Prairie Dog was playing on the roads, the bridges, fences, and buildings. For some reason this river gets more than its share of floods. We need action now if for no other reason than flood control.

As a resident of Norton I would like to say that it is no fun watching your yard and trees burn up because of water rationing that prevented you from watering your yard. And it is a big worry to all of us when there is not enough pressure to use the fire hydrants. Frankly, it doesn't look like the picture ahead is rosy for towns in western Kansas. The water table seems to be going down steadily and the demands for water are going steadily up.

Recreation is so unimportant compare with flood control and adequate water, but I do like to fish, go hunting, and boating. The closest water for those purposes is 45 miles away. More credit should be given to recreational needs in our section of the country.

Gentlemen, we certainly need an appropriation this year to stop this flooding and end our problems on the Prairie Dog. Water is our problem and we would like to control it for the good of all in the area.

SIOUX CITY-DENISON-CRESTON TRANSMISSION FACILITY

STATEMENT OF HON. THOMAS E. MARTIN, A U.S. SENATOR FROM THE STATE OF IOWA

GENERAL STATEMENT

Chairman HAYDEN. Senator Martin.

Senator MARTIN. Mr. Chairman, I have two delegations here this morning. I believe Senator Hickenlooper is scheduled to come to introduce them.

Chairman HAYDEN. Here he is.

Senator MARTIN. Fine.

I will just make my own statement. I will leave the rest to Senator Hickenlooper.

Senator MARTIN. I am very glad to appear personally before you today in support of the appropriation of $1,410,000 for the Sioux City-Denison-Creston, Iowa, power transmission line and $970,000 for the Sioux City-Spencer, Iowa, power transmission line.

The appropriation for fiscal year 1960 of $760,000 has been used for right-of-way acquisition and for the purposes of design. The appropriations requested for fiscal year 1961 for these transmission lines are needed for additional right-of-way acquisition and for construction.

The anticipated future expansion of the volume of power needs in western Iowa will make necessary the transmission facilities in these proposed lines, in addition to the lines already being operated by the privately owned utility companies serving that part of Iowa.

I hope that the committee will provide in the public works appropriations bill for fiscal year 1961 the funds needed for the coming year for these transmission lines that are of great importance to the future well-being of electric service to all of western Iowa.

Thank you very much.

Chairman HAYDEN. Thank you.

Senator HICKENLOOPER. Yes, sir.

TRANSMISSION OF POWER FROM UPPER MISSOURI DAMS

STATEMENT OF HON. BOURKE B. HICKENLOOPER, U.S. SENATOR FROM THE STATE OF IOWA

GENERAL STATEMENT

Senator HICKENLOOPER. Mr. Chairman, I am sorry to be a little late. I just came from another subcommittee meeting, and I have to go to another meeting as soon as I get through here, and try to get there before 11 o'clock, when we have a vote.

This morning I am here—perhaps Senator Martin did present these people. But I am here to introduce to you two groups of very representative people from the State of Iowa, who are concerned in connection with this powerline project, and the transmission of power to Iowa from the upper Missouri dams.

INTRODUCTION OF WITNESSES

I believe the first group that will make its presentation is the Southwestern Federated Power Cooperative of Creston, Iowa, represented by Mr. John J. Hyde, manager; Albert Clayton, director; Henry Siefkas, director; and Carrol Beverlin, director.

Mr. Hyde will make that presentation, I believe.

The Corn Belt Power Cooperative, Humboldt, Iowa, Ben Jaspers, president; R. R. Cejka, director.

The Northwest Power Cooperative, Le Mars, Iowa, Mr. Alfred Schmillen, president; E. J. Dickinson, manager; Everett Dodge, director; Howard Schroeder, manager; William Grainger, member.

The L. & O. Power Cooperative, Rock Rapids, Iowa, Mr. John DeWild, manager.

Western Iowa Municipal Power Group, Raymond Adkins, superintendent, Onawa, Iowa, and Arie Veripps, superintendent, Sioux Center, Iowa.

Central Iowa Power Cooperative, Cedar Rapids, Iowa, W. E. Adams, manager; C. A. Scheerer, director; and Joe F. Storm, director.

The Iowa Rural Electric Cooperative Association, Des Moines, Iowa, Herbert Moehler, president, and Earl King, manager.

The Mid-West Electric Consumers Association, Aberdeen, S. Dak., Kenneth Holum, executive director.

These men indicate, of course, the deep interest in this subject.

Then representing the six Iowa utility companies, which are the so-called private utility companies, which is a misnomer in a way—they are capital stock companies of Iowa that are interested in this. Mr. Milton Kapp, president of the Interstate Power Co., Dubuque, Iowa; Peter A. Stover, chief mechanical engineer, Iowa Electric Light & Power Co., Cedar Rapids, Iowa; R. G. Henneman, engineer, Iowa Illinois Gas & Electric, Davenport, Iowa; A. Paul Thompson, president, Iowa Power & Light Co., Des Moines, Iowa; C. Evan Parks, vice president, Iowa Southern Utilities, Centerville, Iowa; E. M. Raun, president, Iowa Public Service, Sioux City, Iowa; and Edward Ruisch, vice president, Iowa Public Service, Sioux City, Iowa.

Now, Mr. Chairman, I thank you for indulging me in these moments. I can only say that we are interested, and tremendously interested, and it has been provided for—we are interested in getting electricity from the sources of these——

POWER NOW AVAILABLE

Chairman HAYDEN. Is there an allocation of Missouri River Basin power for Iowa at the present time?

Senator HICKENLOOPER. The dams are substantially completed. There is power available, and there will be power available.

Chairman HAYDEN. In other words, there will be no long delay about it?

Senator HICKENLOOPER. That is correct, sir. The power will be available when this matter is able to be decided.

Chairman HAYDEN. Of course the transmission lines have to be started prior to the actual availability of power.

Senator HICKENLOOPER. Well, I want to make this point, Mr. Chairman. From my viewpoint, and I think from the viewpoint of most of us, we are concerned with getting this power for the utility, and into the utility activities of our people, our rural people, and our municipalities and so on. That is what we want.

As I said a year ago, I am not a technician. I cannot analyze electric wattage figures and calculations and all those things. But I am interested in the most efficient and the best method of getting this power o our people, to which we are entitled in the State of Iowa. And we are entitled to our substantial and equitable share of this power—getting it to them in the most efficient manner possible.

And that I have always maintained is a matter for technical calculation which I am not competent to give.

Now, if this committee, which has gone into this matter, will listen to these presentations, and go forward with the program, as is best suited to get electricity to these people, in the most efficient and best way, and the cheapest, feasible, and practical way that we can, in keeping with our programs and our policies—that is what I want.

EQUITABLE SHARE OF POWER

Chairman HAYDEN. The State of Iowa is entitled to an equitable share of the power. Certainly, there is demand for it in the State. And the question is how to get it to the preference customers?

Senator HICKENLOOPER. Yes. From a practical standpoint, there has been some dispute about this matter. As I say, I am not competent, from a technical standpoint to resolve this dispute. I don't feel I was last year. But it was resolved last year, of course. And the matter is here again for the presentation of this committee. I merely want to present these gentlemen, who are all sincere, and who are competent and interested and zealous in getting this power situation.

Thank you.

Chairman HAYDEN. Thank you, Senator.

Mr. Hyde?

WESTERN IOWA TRANSMISSION LINE

STATEMENTS OF JOHN J. HYDE, CHAIRMAN, IOWA COMMITTEE, MISSOURI RIVER POWER, ACCOMPANIED BY RAY ADKINS, SUPERINTENDENT, ONAWA MUNICIPAL UTILITIES, ONAWA, IOWA; BEN JASPERS, PRESIDENT, CORN BELT POWER COOPERATIVE, STEAMBOAT ROCK, IOWA; EVERETT DODGE, DIRECTOR, NORTHWEST IOWA POWER COOPERATIVE, LE MARS, IOWA; AND WILLIAM GRAINGER, MEMBER, NORTHWEST IOWA POWER COOPERATIVE, LE MARS, IOWA

GENERAL STATEMENT

Mr. HYDE. Mr. Chairman and members of the committee, my name is John J. Hyde. I am the manager of Southwestern Federated Power Cooperative, Inc., and chairman of the Iowa Committee—

Missouri River Power. The membership of that committee consists of the rural electric cooperative and municipal preference customers in western Iowa.

We appear here today in support of the appropriation contained in the budget to continue the construction of the Bureau of Reclamation transmission line in western Iowa. We wish to express our heartfelt gratitude to the committee for the inclusion of this line in last year's appropriation.

We also want to commend the Commissioner of the Bureau of Reclamation and the Billings field office and the field engineers of the Bureau for the excellent cooperation received from them.

There was, of necessity, a short timelag after Congress overrode the veto of the public works appropriation bill before activity was commenced on our line. But since the time the Bureau commenced working on the line, progress has been to our satisfaction, and their cooperation has been excellent.

They have accepted substation sites at Creston and Spencer adjacent to cooperatives' steamplants that we offered to them. And they have improved the construction schedule of the Denison-Creston line and substation over the one first set up by them by approximately 1 year at our request.

OPPOSITION OF POWER COMPANIES

The committee will remember that the Iowa power companies bitterly opposed our transmission line last year. We understand from reliable sources that they are intent on circumventing the will of Congress by preventing the construction of the line. It is our information that they will attempt to do this by proposing a delay in appropriations or a change in routing and modifications in the line for their selfish gain and to the detriment of the farmers and municipal systems.

We have five representatives of our committee present today prepared to give very brief statements that we think will prove of real value to you, Mr. Chairman, and the other able and distinguished members of this committee.

Now, we will leave out one of those to try and save your time this morning, and only have four, so with your kind permission, they will now quickly present their statements which are designed to stay within our time allotment.

Chairman HAYDEN. Who is the first one?

Mr. JASPERS. My name is Ben Jaspers. I live in Steamboat Rock, Iowa. I am president of Corn Belt Power Cooperative, Humboldt, Iowa, and am a member of the Iowa Committee for Missouri Power. My son and I still operate the farm on which I was born. I have been associated with the rural electrification program in Iowa since 1937.

SUPPORT OF IOWA TRANSMISSION LINES

I had the privilege of appearing before this committee last year in support of our Iowa transmission lines. I want to express the gratitude of the Iowa farmers to the committee for approving the necessary appropriation to get the line started.

Since the passage of last year's appropriation bill our committee has had additional engineering and financial studies made in con-

nection with the proposed delivery of Bureau of Reclamation power over the Iowa transmission line.

I am happy to tell you that those studies substantiate the statements we made to this committee in our testimony last year. The line will save the farmers of Iowa more than $600,000 per year from the very beginning and this amount will increase from year to year as the load grows. The Government will make a profit off the line.

The Bureau line will offer many other advantages to our farmers when compared with a wheeling arrangement with the power companies. I respectfully refer you to last year's testimony for the details.

It is very important that no changes be made in the routing of the line or in the method of delivery as authorized last year. Any changes or delays would be very costly to the rural electrics and municipalities. The sole beneficiaries of such changes would be the profit power companies, and to the detriment of Iowa agriculture.

We urge this committee to make available adequate appropriations to insure the completion of the facilities approved last year at the earliest possible date.

I thank you very much for the privilege of appearing here.

Chairman HAYDEN. Thank you for your statement, sir.

Mr. ADKINS. Mr. Chairman and members of the committee, my name is Raymond Adkins. I am superintendent of Municipal Utilities of Onawa, Iowa, and I represent the Western Iowa Municipal Power Group which consists of 33 municipally owned electric utilities, all of which are in the Bureau marketing area and have been allocated hydropower by the Bureau of Reclamation.

The municipalities are very grateful to this committee and the 1st session of the 86th Congress for appropriating funds to make the initial start of the Bureau of Reclamation transmission line in Iowa.

LIMITED CAPACITY

There are presently 11 Iowa municipal systems receiving Bureau power over very limited capacity transmission lines. The balance who have received allocations cannot avail themselves of this power until adequate transmission facilities are provided. Therefore, any delay from the present schedule of completion of the Bureau of Reclamation line will cause serious curtailment of service to all municipal systems.

These communities have based their planning on, and are looking forward to, this source of power supply for the development of present and potential industry, in addition to present power usage.

The agriculture area which we represent must be supplemented by more industry in order to serve our increasing population and maintain a balanced economy.

If other interests should attempt once more to stop this appropriation for selfish reasons and substitute a weaker backbone transmission system for the western Iowa transmission needs, the entire program in Iowa would be undependable and incomplete. This would be disastrous to our people.

The people represented by the Western Iowa Municipal Power Group sincerely plead that you reconfirm your earlier actions in re-

gard to the Iowa transmission line appropriation, and urge its completion at the earliest possible date.

We appreciate this opportunity to present our position on this vital matter and thank you for your consideration.

Chairman HAYDEN. Thank you your statement, sir.

Mr. DODGE. Mr. Chairman and members of the committee, my name is Everett Dodge. I am a farmer in O'Brien County, Iowa. I am a director of Northwest Iowa Power Cooperative.

DEALINGS WITH LANDOWNERS

A few weeks ago I was called at the request of representatives of the Bureau of Reclamation to give them an opportunity to explain to the landowners the reasons the lines were being routed diagonally and the procedures which would be followed by the Bureau in its dealings with the landowners in obtaining rights-of-way for the line.

The Bureau representatives explained that routing parallel to the section lines or half section lines would be almost impossible because of structures along the routing and would add approximately 40 percent to the cost of the line over diagonal routing. This would destroy the feasibility of the line.

While the meeting did not satisfy all of the objectors, I believe it was very helpful. Most of the audience appeared to understand the Bureau's position and realized that the line should be built as proposed. It is my opinion, based on this meeting, that once the landowners get all the facts, we shall not have too much opposition to the line.

Although the line will not go over my farm, I should like to express the opinion, as one who have lived on a farm my entire life, that the construction of a line like that proposed by the Bureau of Reclamation in Iowa, while it will cause some inconvenience, it will not hamper the proper operation of a farm or result in reduced income to the farmer.

Mr. Chairman, I have a statement here I would like to present to you from one of the signers of those petitions which was offered to us. I am sorry we don't have more but it wasn't until we arrived in Washington that I became aware of the signers of that petition.

FAVORS DIRECT CROSS-COUNTRY CONSTRUCTION

I would like to read the last paragraph of this statement:

> Since I have become more familiar and informed and realize that the benefit of this area, realizing the exorbitant cost of construction of an alternative route, I definitely favor the plan of direct cross-country construction proposed by the Bureau of Reclamation. I feel the objections put forth by my neighbors stem from the fact that they had not been informed as to the need for more power this line will provide.

Chairman HAYDEN. Thank you.

TRANSMISSION LINE TO CROSS PROPERTY

Mr. GRAINGER. Mr. Chairman and members of the committee, my name is William Grainger. My home is in Crawford County, Iowa. I am a member of South Crawford Rural Electric Cooperative, Dennison, Iowa.

I own and operate a 160-acre farm that will be crossed by the proposed Bureau of Reclamation transmission line in Iowa. I have no objection to the line crossing my farm diagonally. While it will take a little time for us to become accustomed to the line in our fields, I am certain that we shall get used to it before too long and find out how to farm right around it. Also, we shall be paid by the Government for the right-of-way for the line.

I farmed a good many years without electricity and I would not want to go back to those days for anything. The new line has to go through somebody's land.

Unless they were aroused by someone who did not want to see the line built, I don't know why anybody would object to the line going over his farm, when we will all benefit by the additional low-cost power from Missouri River dams. No one has the right to stand in the way of progress.

I thank you for the privilege of appearing before your subcommittee.

PREPARED STATEMENT

Mr. HYDE. May we file the statement for Mr. Clayton?

Chairman HAYDEN. That may be included in the record.

(The statement referred to follows:)

STATEMENT OF ALBERT CLAYTON, MEMBER, FARMERS ELECTRIC COOPERATIVE

Mr. Chairman and members of the committee, my name is Albert Clayton. I am a farmer from Union County, Iowa, and a member of Farmers Electric Cooperative at Greenfield, Iowa.

I own and operate my farm. About 10 years ago, Iowa Power & Light Co. constructed a 161,000-volt transmission line diagonally across my farm. The line is the same type as the one proposed by the Bureau of Reclamation in Iowa.

There are three 2-pole structures on my farm. I have learned to farm around them in such a manner that I could not honestly say there is any loss of income to me because of their being in my fields.

As a matter of fact, a diagonal routing is better than having angles and corners that require anchors and guy wires. You would have to use that kind of construction if you followed the property or section line.

One of the arguments used by those who have been trying to stop the Bureau line from going ahead is that the poles in the middle of a field will make it impossible for a farmer to use a check wire in planting corn. Not only is this not a fact, but it shows how unfair the arguments against the line are, because today very few farmers of Iowa are using the check system of planting corn.

I am certain that if my farm were to be sold it would not bring less per acre because of the existing transmission lines.

I wish to thank you for the privilege of appearing before your subcommittee.

DIAGONAL ROUTING

Mr. HYDE. Thank you, Mr. Chairman, may I please make some brief concluding remarks for our committee?

In regard to the so-called objections to diagonal routing of the transmission line, we are confident this started from unfriendly and deliberate articles in the newspapers and that it is being fostered by our opposition.

We are further confident that by intelligent information and work the objections will not be serious and the final result will be like the recently completed Fort Randall to Columbus, Nebr., 230-kilovolt line constructed by rural electrics. This 128 miles of line was 100

percent diagonal and of the 528 parcels of good Nebraska farms, 97 percent of the easements were obtained without condemnation.

Another example is the 99 miles of 161-kilovolt line ready for construction from Sioux City, Iowa, to Omaha, Nebr., being built by Iowa Public Service Co. and Omaha Public Power District.

NINETY-SIX PERCENT EASEMENT OBTAINED

We understand this is 70 percent diagonal and of 296 parcels of land, 96 percent of the easement obtained. This excludes some parcels of Indian land and some new subdivision parcels in north Omaha.

We, of course, are participating in a U.S. Bureau of Reclamation engineering network analyzer study now being conducted in Denver. The basic purpose of the network analyzer study is to test the Bureau transmission system, in particular with respect to facilities required to deliver firm, peaking, and other capacity at the time "ultimate" hydroelectric development has been achieved on the Missouri River. This is judged to take place by approximately 1965.

We sincerely believe, Mr. Chairman, that any request by any parties to delay appropriations until the network analyzer study is completed would lack honesty, because the network analyzer study now being conducted in Denver has nothing to do with the fairness of the preference customers in Iowa to have low-cost hydropower delivered by Bureau facilities, and it has nothing to do with economic feasibility.

FEASIBILITY STUDY

The feasibility study was made last year by the Department of the Interior, and also made by us, before we ever requested the initial appropriations.

The participation of the power companies in these network analyzer studies is for the purpose of working out mutually beneficial interconnections between the Bureau system as approved by the Congress and the existing facilities of the companies.

Mr. Chairman, we are again grateful for your patience and understanding. We are available to answer questions or furnish additional information.

PREPARED STATEMENT

We have one more statement to file just for the record, of Mr. Schmillen.

(The statement referred to follows:)

STATEMENT OF ALFRED SCHMILLEN, PRESIDENT, NORTHWEST IOWA POWER COOPERATIVE

Mr. Chairman and members of the committee, my name is Alfred Schmillen. My son and I operate a farm in Cherokee County, Iowa. I am president of Northwest Iowa Power Cooperative.

I was asked to act as chairman of a recent meeting, held at Marcus, Iowa, of landowners who had objected to the routing of the Bureau of Reclamation transmission line diagonally across their lands in Cherokee County. The representatives of the Bureau presented slides and information concerning the construction of the line and the obtaining of rights-of-way at the request of those present. This was followed by many questions. I also attended a similar meeting at Remsen where one of the leaders of the opposition to the line, during the open meeting, advised the landowners not to sign easements regardless of

the amount offered in payment for them. The Bureau representatives cannot, of course, tell the landowners how much will be paid for the easements until appraisals have been made.

It is my opinion that after hearing the Bureau's explanation as to how appraisals would be made, the attitude of most of the landowners changed. I believe that when they are informed of the actual amounts they will be paid almost all of them will be satisfied.

The committee may be interested to know that the maps used by the leaders of the opponents to the line were prepared by the Iowa electric utilities.

I would like to congratulate the representatives of the Bureau of the manner in which they conducted these meetings. They were very diplomatic and informative in explaning the problems.

Mr. HYDE. Sir, this concludes our testimony.

Chairman HAYDEN. We thank you for your appearance. I haven't any questions to ask you. I think the committee understands the situation.

Mr. HYDE. Yes, sir. Thank you again.

Chairman HAYDEN. Mr. Edward Ruisch is the next witness.

IOWA PUBLIC SERVICE COMPANY

STATEMENT OF EDWARD RUISCH, VICE PRESIDENT

GENERAL STATEMENT

Mr. RUISCH. Mr. Chairman and members of the committee, we sincerely thank you for the courtesy in having us testify today while in the city.

Chairman HAYDEN. I thought it would be helpful to you. You wouldn't have to make two trips.

Mr. RUISCH. Thank you.

It is a privilege for me to appear before you today in behalf of Iowa's six principal utility companies: Iowa Electric Light & Power Co., Iowa Power & Light Co., Iowa-Illinois Gas & Electric Co., Iowa Southern Utilities Co., Interstate Power Co., and Iowa Public Service Co. These companies have over 8,000 employees and over 93,000 stockholders. Each company is represented here today.

REQUEST FOR FURTHER STUDY

We believe that the proposal to construct Government transmission lines from Sioux City to Spencer and from Sioux City to Creston requires further study. Certain developments of the past year raise questions as to the economic and the technical feasibility of these lines.

Accordingly we feel that the interest of everyone will be best served by the additional study we urge for your consideration.

These developments are especially important since the Bureau of Reclamation did not recommend this project last year. The Bureau is currently making a major board study at Denver and including the Iowa gridlines.

Further study and consideration at this time need not delay the delivery of Missouri River hydropower into Iowa. If such further study results in the proposed lines being built, there is ample time to complete the project before the full allotment of power to be carried by these lines becomes available in 1962 and 1963.

We realize that about 10 percent of the estimated cost of this project has been appropriated and that some money has been spent. We believe that the integration of systems through interconnections will result in future savings to both preference and nonpreference groups as well as to the Government. The result of the Bureau study should therefore be known.

PRECEDENT FOR DELAY

There is a precedent for such a delay in a decision made last year on the public works appropriation bill, 1960. Let me quote to you from page 22 of House of Representatives Report No. 424 of the 1st session of this 86th Congress:

> Funds amounting to $1,078,000 budgeted for a second circuit on the Fort Thompson-Granite Falls line have been deleted.
>
> Additional generation from Oahe Dam will not begin to come on the line until late September of 1962. In view of this a 1-year delay in construction of the second circuit is reasonable.

The public interest is heavily involved in the substantial sums which will be required if the lines are built. We, therefore, believe that the public at large should be assured that this project is economically and technically feasible.

As originally proposed, this project was, at best, economical by a small margin. The Bureau of Reclamation memorandum on the economic feasibility of the project shows an estimated deficit of $49,300 for the first year and, by the fifth year, a surplus of $12,600 a year for the rest of the 50-year study; $12,600 certainly provides only the narrowest of margins.

Attached is a tabulation of revenue and expenses as estimated by the Bureau of Reclamation in their study, exhibit A.

POSSIBLE DEFICIT

Events of this past year indicate that this narrow margin may well be converted into a deficit through the entire 50-year amortization period covered by the initial study.

First. The above Bureau estimates did not include interconnections to the Iowa grid system. Neither the 70-mile single-circuit line to Spencer, nor the 150-mile single-circuit line to Creston, can be considered a firm supply source by any customer because of their length and exposure to the elements, floods, storms, fires, and other hazards.

In addition, the basic supply line from Fort Randall to Sioux City is likewise a single-route course and has failed on occasions. We understand it to be the policy of the Bureau that it cannot and does not assume utility responsibility including full-time service in event of failures. The proposed lines will need to be firmed preferably through 161-kilovolt grid interconnections. The cost of such interconnections is not included in the feasibility study.

Their importance is well illustrated by the emergencies which the Iowa power grid, built by the Iowa electric companies, has met in the past year alone. On April 10, 1959, a complete failure of the entire North Omaha plant; 60,000 kilowatts of emergency power was supplied through the Iowa grid.

On July 9, 1959, a 230,000-volt transmission system of the Bureau in South Dakota failed and emergency power through the Iowa grid instantly supplied loads of the Northwest Iowa Power Cooperative and the East River Power Cooperative in South Dakota.

On December 4, 1959, a plant failure in Kansas City.

On January 2, 1960, the 230,000-volt Bureau line from Fort Randall to Sioux City failed and the Iowa grid supplied 160,000 kilowatt-hours to the Northwest Iowa Power Cooperative during a 6-hour period.

On March 22, 1960, a plant failure at Kansas City. Sixty thousand kilowatts of emergency power was supplied through the Iowa grid.

EMERGENCY FACILITIES

In every case the interconnections provided by the Iowa grid, and the plant capacity provided by the Iowa power companies kept the electricity flowing. Only such emergency facilities can provide the best insurance of electric service to hospitals, schools, and homes, farms, and businesses.

Chairman HAYDEN. There is no question at all that close cooperation between the Bureau of Reclamation lines and the power company are advantageous to both of them.

Mr. RUISCH. Absolutely. We agree to them.

Chairman HAYDEN. I think that was demonstrated first in Oklahoma, where we had our original problem.

Mr. RUISCH. It has been demonstrated in Iowa, and our relationship has been exceedingly cordial. We appreciate it. We are going to keep it that way.

Thank you.

INTERCONNECTION AND INTEGRATION

Interconnection and integration are also desirable—to the point of necessity—for a number of reasons:

(1) To permit joint studies for all parties to determine the most economical and practical methods of system expansion.

(2) To permit joint ownership of transmission and substation facilities so that fixed charges could be shared by two or more suppliers.

(3) To allow joint ownership of larger generation stations, which cost less per unit of capacity, and are more efficient than the smaller station which a single supplier could economically justify.

(4) To provide the immediate availability of the reserve capacity of all generating groups for both emergency and firm requirements, particularly within the State of Iowa. Such reserve capacity would also provide economy energy for suppliers which could thereby curtail the hours use of high-fuel-cost machines. The companies have previously proposed contracts for such service to generation and transmission.

(5) To provide the immediate availability of nonfirm hydropower through existing interconnections.

(6) To make available the use of spare capacity in existing substation facilities of the utility companies by the preference customers as set out in the wheeling offers.

(7) To make possible the use of the excess winter reserve of the Iowa utilities whose summer peaks now exceed winter peaks.

RIGHTS-OF-WAY COSTS

We are not apparently and will have nothing to do with the trouble in northwest Iowa regarding rights-of-way. Our company has on occasion paid as much as $6,000 a mile for the right-of-way right, and we don't like to see that precedent established and continued.

Chairman HAYDEN. Why would you have to pay such a price as that? On account of existing structures?

Mr. RUISCH. In one county we have to pay $6,400-a-mile average, to get through there, because the farmers objected to the routing going through there. And that was not diagonal. It was sheriff's condemnation procedure.

However, news releases indicate that groups of farmers along the proposed Sioux City-Spencer route many of them members of electric cooperatives, are petitioning for routes along section and quarter section lines. Such construction costs would be excessive. However, an equitable price for rights-of-way along direct routes must be recognized.

Either of the foregoing costs—first, the cost of firming up the electric service, and second, the apparent increased right-of-way and/or construction cost—would quickly nullify many times over the narrow margin of $12,600 a year. Combined, we feel they certainly call for a reexamination of the economic feasibility of this project.

There is, perhaps, an even more important reason for again reviewing this project. There is grave doubt that this project is technically adequate.

NETWORK ANALYZER STUDY

A network analyzer study of a system of this type is vital to test the design features. Such a study in effect uses a working model of an actual system with generators, lines, transformers, peakloads, and so forth, reproduced in miniature.

The Bureau of Reclamation is making such a study at Denver. We feel that the results of this study should be considered before proceeding any further with this project, either of the foregoing costs.

Chairman HAYDEN. What is the nature of the Bureau's Denver study?

Mr. RUISCH. I understand this started as a general study in connection with the advent of Big Ben, and the Oahe Dams, and the power from them. And in our visits with the Bureau of Reclamation at Billings, they preferred to include the principal Iowa grid lines, and we have given them that information.

A network analyzer study has already been done at Iowa State University at Ames by the Iowa electric companies. This test indicated that, if the Government transmission lines are interconnected with the company lines to assure a reliable supply of power, the allotted Government power may not even flow over the section of the proposed Government line into the Creston area, but rather over the company lines.

It showed, further, that Government power will flow over the company lines which are to be operated in parallel with the proposed lines to Spencer and to Creston.

Accordingly, payments would be required to the companies for the use of their lines. This obviously further alters the economic feasibility of the proposed lines.

And these are only two of the technical problems that may be uncovered by the Bureau network analyzer study now going on in Denver. There may be more. The study may also demonstrate which routes are the most practical. In any event good and sufficient reason exists to wait and see the results of this study before proceeding further with major project expenditures.

We reaffirm our belief that the construction of these Bureau lines in Iowa is unnecessary and a waste of Federal funds.

GRID SYSTEM ADEQUATE

Our board study shows that the facilities exist in Iowa today to deliver all the Government generated power for preference customers. The Iowa grid system is entirely adequate to wheel this power—all the firm, secondary and dump power to be available. In fact, the grid system was specifically designed with this in mind and to fulfill a pledge to Congress.

In 1951, I came before committees of Congress both House and Senate, and said, "Our company is willing to negotiate with the Bureau so that when Missouri River Federal power is made available to Iowa it can be distributed over these circuits and their planned additions."

At that same time Mr. N. Barnard Gussett, Iowa Power & Light Co., testified before this committee that "present and planned extensions of the electric facilities of existing agencies are and will be adequate to serve Iowa."

These facilities have been built. Our six companies have an investment of over $50 million in this system. The grid system is capable of handling all the Government hydropower that will be made available. The five companies directly involved made 20-year wheeling offers for the transmission and delivery of this power in accordance with the standard requirements of the Bureau of Reclamation.

Copies of these offers are attached to this report as exhibit C, together with a map of the companies' facilities, exhibit D, which shows how delivery would be made.

SAVINGS TO GOVERNMENT

By using these facilities—planned for this very purpose—the Government will save $500,600 a year ($155,200 operating costs, and $345,400 amortization), or a great deal more if cost factors cited in this report are considered. This amounts to more than $25 million over the 50-year period covered by the Bureau's feasibility study.

The wheeling offers for the Bureau's estimated kilowatt-hours would result in an annual wheeling fee to our companies of about $230,000, which is only 2.6 percent of the estimated Government investment.

It has been previously testified that preference customers will save $2¼ million a year because of the lower cost of hydropower. We are of the opinion that the necessities of utility responsibility and

the advantages of integration require that part of this savings should be invested by the preference customers in a system of interconnections with the Iowa grid. We contend that, in fairness to the people as a whole, part of this alleged savings should be used to defray—through the wheeling contracts we have offered—the cost of delivering this power to the preference customers. Even when both of these conditions are met, the preference customers will effect savings in their operations.

In this connection, we cannot reconcile the statement that a wheeling arrangement with the companies would cost the preference customers $619,000 the first year and larger amounts thereafter. Certainly there will be interconnection costs under either plan. The firm and nonfirm power will be delivered under either plan.

In fairness to the 72 percent of Iowans served by our companies, and to taxpayers everywhere, who are not preference customers, no group should ask the Government to spend an additional half-million dollars a year, or, as we believe, much more, to duplicate existing facilities for their sole benefit.

SUMMARY OF POSITION

Let us summarize the position of our companies. We note the objective of supplying Government-generated power to preference customers. This is not an issue. But we do believe the plan for construction of Government transmission lines requires full study:

(*a*) Because there are indications that this project is no longer economically feasible;

(*b*) Because recent studies indicate that this project is not technically adequate;

(*c*) Because large savings can be realized by all suppliers through future interconnected and integrated power systems;

(*d*) Because the facilities presently exist to deliver this power and were, in fact, designed for this purpose;

(*e*) Because preference customers will receive all the Government generated hydropower available at lower costs regardless of who transmits the power;

(*f*) Because the line puts an additional penalty on the 72 percent of Iowans and taxpayers everywhere who do not get preference customer advantages, and finally;

(*g*) Because the Government can conserve $25 million for useful purposes by employing existing facilities.

For these reasons we suggest that, since the firm allotments of Missouri River hydropower are scheduled for 1962 and 1963, additional appropriations for the lines be tabled at least until you have the opportunity to review the Bureau's studies now in progress.

PREPARED STATEMENT

Mr. Chairman, we would like to present this statement for the record.

We thank you.

Chairman HAYDEN. It will be included in the record. Careful attention will be given to it.

(The statement referred to follows:)

STATEMENT BY EDWARD RUISCH, VICE PRESIDENT, IOWA PUBLIC SERVICE CO.

Mr. Chairman and members of the committee, it is a privilege for me to appear before you today in behalf of Iowa's six principal utility companies: Iowa Electric Light & Power Co., Iowa Power & Light Co., Iowa-Illinois Gas & Electric Co., Iowa Southern Utilities Co., Interstate Power Co. and Iowa Public Service Co. These companies have over 8,000 employees and over 93,000 stockholders. Each company is represented here today.

We believe that the proposal to construct Government transmission lines from Sioux City to Spencer and from Sioux City to Creston requires further study. Certain developments of the past year raise questions as to the economic and the technical feasibility of these lines. Accordingly, we feel that the interest of everyone will be best served by the additional study we urge for your consideration. These developments are especially important since the Bureau of Reclamation did not recommend this project last year. The Bureau is currently making a major board study at Denver and including the Iowa grid lines.

Further study and consideration at this time need not delay the delivery of Missouri River hydropower into Iowa. If such further study results in the proposed lines being built, there is ample time to complete the project before the full allotments of power to be carried by these lines become available in 1962 and 1963.

We realize that about 10 percent of the estimated cost of this project has been appropriated and that some money has been spent. We believe that the integration of systems through interconnections will result in future savings to both preference and nonpreference groups as well as to the Government. The result of the Bureau study should therefore be known.

There is a precedent for such a delay in a decision made last year on the public works appropriation bill, 1960. Let me quote to you from page 22 of House of Representatives Report No. 424 of the 1st session of this 86th Congress. "Funds amounting to $1,078,000 budgeted for a second circuit on the Fort Thompson-Granite Falls line have been deleted. Additional generation from Oahe Dam will not begin to come on the line until late September of 1962. In view of this a 1-year delay in construction of the second circuit is reasonable."

The public interest is heavily involved in the substantial sums which will be required if the lines are built. We therefore believe that the public at large should be assured that this project is economically and technically feasible.

As originally proposed, this project was, at best, economical by a small margin. The Bureau of Reclamation memorandum on the economic feasibility of the project shows an estimated deficit of $49,300 for the first year and, by the fifth year, a surplus of $12,600 a year for the rest of the 50-year study. Twelve thousand and six hundred dollars certainly provides only the narrowest of margins.

Attached is a tabulation of revenue and expenses as estimated by the Bureau of Reclamation in their study, exhibit A.

Events of this past year indicate that this narrow margin may well be converted into a deficit through the entire 50-year amortization period covered by the initial study.

First, the above Bureau estimates did not include interconnections to the Iowa grid system. Neither the 70-mile single circuit line to Spencer, nor the 150-mile single circuit line to Creston, can be considered a firm supply source by any customer because of their length and exposure to the elements, floods, storms, fires, and other hazards. In addition, the basic supply line from Fort Randall to Sioux City is likewise a single-route source and has failed on occasions. We understand it to be the policy of the Bureau that it cannot and does not assume utility responsibility including full-time service in event of failures. The proposed lines will need to be firmed preferably through 161-kilovolt grid interconnections. The cost of such interconnections is not included in the feasibility study.

Their importance is well illustrated by the emergencies which the Iowa power grid, built by the Iowa electric companies, has met in the past year alone.

On April 10, 1959, a complete failure of the entire north Omaha plant. Sixty thousand-kilowatts of emergency power was supplied through the Iowa grid.

On July 9, 1959, a 230,000-volt transmission system of the Bureau in South Dakota failed and emergency power through the Iowa grid instantly supplied loads of the Northwest Iowa Power Cooperative and the East River Power Cooperative in South Dakota.

On December 4, 1959, a plant failure in Kansas City.

On January 2, 1960, the 230,000-volt Bureau line from Fort Randall to Sioux City failed and the Iowa grid supplied 160,000-kilowatt-hours to the Northwest Iowa Power Cooperative during a 6-hour period.

On March 22, 1960, a plant failure at Kansas City: 60,000 kilowatts of emergency power was supplied through the Iowa grid.

In every case the interconnections provided by the Iowa grid and the plant capacity provided by the Iowa power companies kept the electricity flowing. Only such emergency facilities can provide the best insurance of electric service to hospitals, schools, homes, farms, and businesses.

Interconnection and integration are also desirable—to the point of necessity—for a number of reasons:

(1) To permit joint studies for all parties to determine the most economical and practical methods of system expansion.

(2) To permit joint ownership of transmission and substation facilities so that fixed charges could be shared by two or more suppliers.

(3) To allow joint ownership of larger generation stations, which cost less per unit of capacity, and are more efficient than the smaller station which a single supplier could economically justify.

(4) To provide the immediate availability of the reserve capacity of all generating groups for both emergency and firm requirements, particularly within the State of Iowa. Such reserve capacity would also provide economy energy for suppliers which could thereby curtail the hours' use of high fuel cost machines. The companies have previously proposed contracts for such service to generation and transmission groups.

(5) To provide the immediate availability of nonfirm hydropower through existing interconnections.

(6) To make available the use of spare capacity in existing substation facilities of the utility companies by the preference customers as set out in the wheeling offers.

(7) To make possible the use of the excess winter reserve of the Iowa utilities whose summer peaks now exceed winter peaks.

Secondly, rights-of-way costs in well-developed areas can be high. Construction economies always dictate a direct route. However, news releases indicate that groups of farmers along the proposed Sioux City-Spencer route, many of them members of electric cooperatives, are petitioning for routes along section and quarter section lines. Such construction costs would be excessive. However, an equitable price for rights-of-way along direct routes must be recognized.

Copies of news releases are attached, exhibit B.

Either of the foregoing costs—first, the cost of firming up the electric service, and second, the apparent increased right-of-way and/or construction cost—would quickly nullify many times over the narrow margin of $12,600 a year. Combined, we feel they certainly call for a reexamination of the economic feasibility of this project.

There is, perhaps, an even more important reason for again reviewing this project. There is grave doubt that this project is technically adequate.

A network analyzer study has already been done at Iowa State University at features. Such a study in effect uses a working model of an actual system with generators, lines, transformers, peak loads, etc., reproduced in miniature.

The Bureau of Reclamation is making such a study at Denver. We feel that the results of this study should be considered before proceeding any further with this project.

A network analyzer study has already been done at Iowa State University at Ames by the Iowa electric companies. This test indicated that, if the Government transmission lines are interconnected with the company lines to assure a reliable supply of power, the allocated Government power may not even flow over the section of the proposed Government line into the Creston area, but rather over the company lines.

It showed, further, that Government power will flow over our company lines which are to be operated in parallel with the proposed lines to Spencer and to Creston. Accordingly, payments would be required to the companies for the use of their lines. This obviously further alters the economic feasibility of the proposed lines. And these are only two of the technical problems that may be uncovered by the Bureau network analyzer study now going on in Denver. There may be more. The study may also demonstrate which routes are the most practical. In any event good and sufficient reason exists to wait and see

the results of this study before proceeding further with major project expenditures.

We reaffirm our belief that the construction of these Bureau lines in Iowa is unnecessary and a waste of Federal funds.

Our board study shows that the facilities exist in Iowa today to deliver all the Government-generated power for preference customers. The Iowa grid system is entirely adequate to wheel this power—all the firm, secondary, and dump power to be available. In fact, the grid system was specifically designed with this in mind and to fulfill a pledge to Congress.

In 1951 I came before committees of Congress, both House and Senate, and said, "Our company is willing to negotiate with the Bureau so that when Missouri River Federal power is made available to Iowa it can be distributed over these circuits and their planned additions."

At that same time Mr. N. Bernard Gussett, Iowa Power & Light Co., testified before this committee that "present and planned extensions of the electric facilities of existing agencies are and will be adequate to serve Iowa."

These facilities have been built. Our six companies have an investment of over $50 million in this system. The grid system is capable of handling all the Government hydro power that will be made available. The five companies directly involved made 20-year wheeling offers for the transmission and delivery of this power in accordance with the standard requirements of the Bureau of Reclamation.

Copies of these offers are attached to this report as exhibit C, together with a map of the companies' facilities, exhibit D, which shows how delivery would be made.

By using these facilities—planned for this very purpose—the Government will save $500,600 a year ($155,200 operating costs, and $345,400 amortization), or a great deal more if cost factors cited in this report are considered. This amounts to more than $25 million over the 50-year period covered by the Bureau's feasibility study.

It has been previously testified that preference customers will save $2¼ million a year because of the lower cost of hydro power. We are of the opinion that the necessities of utility responsibility and the advantages of integration require that part of this savings should be invested by the preference customers in a system of interconnections with the Iowa grid. We contend that, in fairness to the people as a whole, part of this alleged savings should be used to defray—through the wheeling contracts we have offered—the cost of delivering this power to the preference customers. Even when both of these conditions are met, the preference customers will effect savings in their operations.

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Let us summarize the position of our companies. We note the objective of supplying Government-generated power to preference customers. This is not an issue. But we do believe the plan for construction of Government transmission lines requires full study:

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(*g*) Because the Government can conserve $25 million for useful purposes by employing existing facilities.

For these reasons we suggest that, since the firm allotments of Missouri River hydropower are scheduled for 1962 and 1963, additional appropriations for the lines be tabled at least until you have the opportunity to review the Bureau's studies now in process.

EXHIBIT A

CONSTRUCTION OF FEDERAL TRANSMISSION LINES IN WESTERN IOWA

A Bureau memorandum to the Secretary dated February 16 analyzed four possible plans for transmission lines in Iowa and indicated that on a preliminary study, only plan 4 had financial feasibility. Subsequent study and refinement of estimated costs and revenues now indicate that plan 1 also is financially feasible.

Revised data for plan 1 are as follows:

	Length (miles)	Capacity (kilovolt-ampere)	Estimated cost
Transmission lines:			
Sioux City-Spencer 161 kilovolts	70		$1,838,000
Sioux City-Creston 161 kilovolts	150		4,410,000
Subtotal			6,248,000
Substations:			
Sioux City additions			546,000
Spencer		55,000	847,000
Harlan		45,000	695,000
Creston		30,000	552,000
Subtotal			2,640,000
Total estimated cost			8,888,000

Sales of energy	Megawatt-hours		
	Initial year	5th year [1]	10th year [1]
Cooperatives:			
Firm	221,400	244,600	244,600
Nonfirm, in market area	15,630	49,740	106,120
Nonfirm, outside market area	82,000	80,000	0
Municipalities:			
Firm	90,600	99,400	99,400
Nonfirm, in market area	6,370	20,260	43,880
Nonfirm, outside market area	0	0	0
Total	416,000	494,000	494,000

[1] Includes allowance for Big Bend ultimate allocation, approximately 10 percent of firm power.

REVENUES FROM SALES

Based upon the standard Missouri River Basin firm power rate schedule and an average monthly load factor of 50 percent, with application of 5 percent delivery substation discount, an average revenue per kilowatt-hour of 5.13 mills is used. The average composite revenue per kilowatt-hour from secondary and dump sales is estimated at 3.25 mills.

	Initial	5th year	10th year
Revenues:			
Cooperatives	$1,446,600	$1,676,900	$1,601,700
Municipalities	491,700	575,600	650,800
Total	1,938,300	2,252,500	2,252,500
Estimated annual operating costs:			
Operation and maintenance (including overhead):			
Transmission lines ($132×220 miles)		29,000	
Substations ($0.40×135,000 kilovolt-amperes)		54,000	
Subtotal			83,000
Replacement reserve:			
Transmission lines (0.33×0.01856×$6,248,000)		38,300	
Substations (0.89×0.014409×$2,640,000)		33,900	
Subtotal			72,200
Total			155,200

Feasibility	Initial year	5th year	10th year and thereafter
(1) Operating revenue	$1,938,300	$2,252,500	$2,252,500
(2) Operating revenue deductions:			
(a) Energy cost on backbone system, 2.69 mills × annual kilowatt-hours [1]	1,175,000	1,395,300	1,395,300
(b) Wheeling and/or discount costs, 1 mill × annual kilowatt-hours [2]	312,000	344,000	344,000
(c) Total annual operating costs	155,200	155,200	155,200
(d) Amortization with interest, 3 percent for 50 years	345,400	345,400	345,400
Total revenue deductions, (a)+(b)+(c)+(d)	1,987,600	2,239,900	2,239,900
Annual surplus or deficit, (1)−(2)	(49,300)	12,600	12,600
Accumulated 50-year surplus		420,300	

[1] Includes 5 percent transmission and substation losses.
[2] Based on firm energy delivered at substations.

NOTE.—The transmission system of plan 1 has greater capabilities and is a more flexible system than the plan 4 system. The plan 1 system is that which is most favored by Iowa interests.

EXHIBIT B

[From the Paullina Times, Paullina, Iowa, Feb. 11, 1960]

BIG HIGHLINE MAY SLASH DIAGONALLY ACROSS COUNTY—O'BRIEN FARMERS PETITION CONGRESSMEN TO INTERCEDE WITH FEDERAL AGENCY

O'Brien County farmers along the tentative route being surveyed for a proposed highline to "wheel" Missouri River power from the Hinton substation of the Bureau of Reclamation northeast toward Spencer, were shocked last week as they learned that the Federal Government project would be running diagonally across their farms.

It would appear that the Hinton-Spencer line would run diagonally across farms on a line between these two spots. This would bring it directly through farms on a line drawn from the south side of Remsen to the south edge of Paullina, on through the Gaza area toward the northeast.

It is expected that the 161,000-volt line will be carried on double-pole structures, possibly steel towers, each pair of poles set 17 feet apart. West of Spencer the line will tie into a new substation of the Corn Belt Power Co-op to connect the two power sources.

Authorization for engineering the project and an $800,000 appropriation passed the Congress at the last session, after a hot political fight in which opponents of the new lines were accused of trying to keep Iowa farmers from enjoying the benefits of "cheap Missouri River power."

NOT NEEDED

Opponents of the appropriation—including the private utilities in Iowa—claimed that the Iowa grid system, built by the private utilities, could "wheel" the power over the already constructed Iowa grid and thus save the Government the expense of building lines the private utilities claimed would duplicate their facilities.

In the end, however, the engineering appropriation was passed, providing the money for the survey now being made. Construction of the lines is expected to require another $8 million.

PETITIONS

In an attempt to head off this threat to the workability of a string of farms running directly through the Paullina area, a group of O'Brien County farmers were busy last week with petitions that will be sent to Congressman Charles B. Hoeven and to Iowa Senator Tom Martin.

The petitions ask the two men to use the influence of their offices to urge the Federal Bureau of Reclamation to follow section lines—or quarter section lines, a least—instead of going diagonally without regard for damage to valuable farmlands here.

THE TAXPAYER

The petitioners are not taking exception to the Bureau's project as such, only to the damage it could do their farms or their neighbors' farms, depending on the exact route followed.

However, as taxpayers, they and the rest of us can well frown at the nearly $9 million of taxpayers' money that will be spent to duplicate lines already established either by the REA or by private enterprise, which includes our own Iowa Public Service Co. that for years has provided standby service for Paullina.

Men who have studied the Federal agency's demands for a huge new highline, agree that it is only duplicating lines already constructed. To the writer, the project is typical of Government entry into business.

[From the Lamars Globe-Post, Feb. 22, 1960]

DIAGONAL HIGHLINE BRINGS PROTEST

Leo Gengler, of Remsen, has received a reply from L. W. Bartnh, regional director of the U.S. Department of Interior, Bureau of Reclamation, whose office is at Billings, Mont., regarding a highline which the Bureau of Reclamation purposes to build from Hinton to Spencer, crossing a large part of Plymouth County.

A meeting was held Friday night at Primghar, attended by interested farmers and by E. J. Dickinson, local Nipco manager.

In the letter, Mr. Bartnh, of Billings, Mont., said that meetings will be held in all areas along the proposed line and that farmers will be notified of the local meetings.

The position of the farmers is explained in the following from E. F. K. in the Remsen Bell Enterprise:

"Farmers whose lands will be affected by the intrusion of the proposed high power electric line diagonally from Hinton to Spencer are rightfully 'up in arms.' Petitions against the proposed line are being signed freely not only by those in direct line but hundreds of others.

"The new line would place poles across farmlands in pairs 17 feet apart, to make for difficulty in plowing, seeding, and harvesting, and highline workers would be free to stalk over the land in making repairs and adjustments.

"One realtor was of the opinion that farmlands over which the line would stretch would be decreased at least $50 per acre in value, and others say they wouldn't consider buying such a farm at a much bigger price devaluation.

"The Bureau of Reclamation argues a big saving in building the line if the diagonal route were chosen, but seems to disregard the landowner and farm tenant.

"So there's much to argue about, but the average bystander, I'm sure, leans with the farmer and his rights. There's plenty of money spent for sillier things that a right-angle course among hundreds of farms for the sake of serving any particular community."

McCormack Got Mad at Primghar

E. J. Dickinson, manager of Nipco was at St. Louis this morning and could not be reached for information on the hassel between the Bureau of Reclamation and Plymouth County farmers who are getting ready to contest a move to run a high line diagonally from Sioux City to Spencer via Hinton and Remsen.

Several farmers in Plymouth County attended a meeting at Primghar but they said they didn't get much satisfaction out of it. The meeting was presided over by C. R. Bightman and was attended by E. McCormack of Billings, Mont., office of the Bureau of Reclamation.

The Plymouth Countians said that Bightman remained calm but McCormack got excited, and told the farmers that if they objected to having a high line cut across their farms the Government would condemn a right-of-way anyway the same as a railroad company or highway.

The Globe-Post said over radio KLEM several weeks ago that if farmers prevented a surveying crew from coming across their land they could not later condemn the land. The radio speaker said they would have to have the survey figures before they could condemn. Some farmers were told the land could be condemned first and surveyed later. Mr. Dickinson promised to make a clarifying statement when he has a chance.

Ordinarily a property owner has the right to use a shotgun or whatever force is necessary to prevent trespassing, and this would go for Government surveying crews, too. However, it is understood that most farmers took the surveyors word for it that they had to let them go on their land, and the survey is now made.

"Well, let them condemn and be hanged," said one farmer who suggested that bureaucrats would get tired if they had to condemn 100 percent of the land they want.

[From the Paullina (Iowa) Times, Feb. 25, 1960]

Objectors to High Line Plan Fill Auditorium

Farmers and landowners, objecting to the Reclamation Department's big high line running diagonally across their fields, through this area, were invited to a meeting held last Friday night at the Farm Bureau building auditorium Newspaper publishers and other interested people were also invited.

The O'Brien County REA office had arranged for the meeting in an attempt to resolve the differences of opinion about the location of the high line.

Everett Dodge, president of the O'Brien REA, chairmaned the meeting and was aided in the explanations by C. R. Brightman, Billings, Mont., head of reclamation in this area; Mr. McCormick, in charge of purchasing right-of-way for reclamation and the manager of NIPCO at LeMars.

The crowd, almost 100 percent, opposed the proposed location of the 161,000 volt line that would connect a NIPCO substation at Hinton, with the Corn Belt REA plant at Spencer.

Brightman, who was primarily the spokesman for the Reclamation Department, devoted most of his discussion to pointing out the necessity of traveling the most direct line for reasons of economy. He stated it would add 40 percent more to the $8 million project if they went due east and then north to Spencer.

The big poles carrying the lines would be about 17 feet apart and sets of poles would be separated an average of about 700 feet.

The speakers were bombarded with questions from an aroused audience and attempted to answer most of them.

Indications are that all would proceed as planned unless legislative action in Washington would stop construction of the line.

[From the Paullina (Iowa) Times, Mar. 3, 1960]

Congressman Hear of Reclamation's Plan To Cut Across Farms

O'Brien County farmers of the Paullina-Gaza area have received indications that Iowa Congressmen are interested in their fight to keep the Federal Government's Bureau of Reclamation from carrying out a plan to cut diagonally across farms of this area with a high voltage transmission line that is to connect their Hinton substation with the REA's Corn Belt powerplant between Everly and Spencer.

Petitions containing the names of most of the farmers in the affected area, and many others of town and country, were sent to Iowa Senator Tom Martin, and the Eighth District Representative Charles B. Hoeven.

Senator Martin assured the group that he would use the petitions and information in discussions with the Bureau of Reclamation.

Congressman Hoeven has resubmitted the complaints to the Department of Interior. He recently received a reply from the Assistant Secretary of the Interior Fred G. Aandahl. The latter stated that in light of the information received from Congressman Hoeven that they would do everything possible to protect the landowner's rights.

The Bureau in studying possible alternatives to avoid damaging individual farm properties.

At the time Aandahl's letter was written (we think prior to receipt of the petitions) he was under the impression that all REA members were in favor of Reclamation's plans. The protesting group, here, intends to clarify the matter by informing Washington that most of the men in the protesting group are REA members but that they still wanted the high line to follow the farm fence lines instead of slashing through their fields.

The 161,000 volt line proposed would be carried by a series of double pole structures with the poles 17 feet apart and the pairs being set up about every 700 feet. Engineers are already busy setting up the route the line would follow.

EXHIBIT C

MARCH 4, 1959.

Mr. R. J. WALTERS, Jr.,
Regional Director, Bureau of Reclamation,
Denver Federal Center, Denver, Colo.

DEAR MR. WALTERS: The undersigned private utilities in Iowa submit the following information and proposal to the U.S. Bureau of Reclamation for its analysis and consideration. Representatives of these utilities have met several times during the past 4 months with representatives of the REA cooperatives and municipal electric systems to consider the most feasible way to deliver electric power and energy to the preference customers of the U.S. Bureau of Reclamation in the Iowa portion of its marketing area.

Recent studies made by these private utility companies show that their transmission facilities are entirely adequate to permit delivery of Bureau allocations of power to the Bureau's preference customers in Iowa without the construction of duplicating facilities by the Bureau of Reclamation. Therefore, the undersigned private utilities hereby propose to the U.S. Bureau of Reclamation the following:

"As an alternate to the construction of transmission lines in Iowa by the Bureau, the Iowa utility companies are willing to wheel to the preference customers, over surplus capacity, firm and secondary energy at 33 kilovolts or above for 1 mill per kilowatt-hour plus 7 percent for losses. However, if the customer takes delivery directly from a company's 161-kilovolt or 115-kilovolt lines at points from time to time agreed upon in writing, the wheeling rate shall be one-half mill per kilowatt-hour plus losses to be agreed upon. It is further provided that, for deiveries scheduled by the Bureau as dump energy, the monetary fees for wheeling stated above shall each be decreased by 50 percent.

"The initial points of delivery from the 161-kilovolt and 115-kilovolt lines shall be at or near Iowa Public Service Co., Sac substation; Iowa Public Service Co., Pomeroy substation; Iowa Electric Light & Power Co., Guthrie center; Iowa Power & Light Co., Avoca substation; Iowa Power & Light Co. Creston, Iowa; Iowa Power & Light Co., Clarinda substation.

"The companies in addition will permit the use of presently installed facilities of less than 33 kilovolts and of existing substations at the initial 161-kilovolt or 115-kilovolt delivery points without additional wheeling or rental fee, provided, however, that when surplus capacity in such existing facilities is no longer available the providing of new facilities shall be a matter for determination between the company and the customer.

"The companies assert that surplus capacity will be sufficient to permit delivery for the period from 1963 to 1966, inclusive, of Bureau allocations of power in Iowa which are not delivered directly from Bureau facilities."

For your convenience this proposal is made in one document by and on behalf of the undersigned individual companies. Iowa Public Service Co. (attention

of Mr. Ed Ruisch, vice president, Box 778, Sioux City, Iowa), has been designated administrative agent on this proposal. An enclosed map shows the transmission lines in Iowa and the proposed initial points of delivery at 161 kilovolts and 115 kilovolts.

Yours very truly,

Iowa Public Service Co., Edward Ruisch, Vice President; Iowa Electric Light & Power Co., Herbert Henderson, Vice President; Iowa-Illinois Gas & Electric Co., H. A. Kleinman, Vice President; Iowa Power & Light Co., J. F. McLaughlin, Vice President; Iowa Southern Utilities Co., C. E. Parks, Vice President.

MARCH 24, 1959.

Mr. R. J. WALTERS, Jr.,
Regional Director, Bureau of Reclamation,
Denver Federal Center, Denver, Colo.

DEAR MR. WALTERS: Under date of March 4, 1959, the undersigned private utilities of Iowa submitted a proposal to wheel Bureau of Reclamation power to preference customers in Iowa. Recently we learned that the preference customers, particularly the municipalities, may wish to avail themselves of appreciable amounts of secondary or nonfirm power.

The utility companies have conducted a network analyzer study at Iowa State College, which study included the loads of preference customers in Iowa to be supplied through the Hinton substation of the Bureau.

This network analyzer study confirms—

1. The results of a previous study proving the adequacy of our facilities to effectively wheel Government hydropower.

2. That considerable power is delivered throughout Iowa on a displacement basis made possible by integrated pooling operations and that the delivery of Bureau power to its preference customers will be by similar displacement.

Accordingly, we wish to supplement our proposal of March 4, 1959, with the following statement:

"The transmission lines of the undersigned utility companies being substantially interconnected in Iowa and with neighboring electric systems, have sufficient capacity to also effectively wheel such secondary or nonfirm hydropower as may be made available in Iowa."

We believe that our proposal affords an opportunity for additional interconnections between the electric systems of the private utilities and preference customers for the benefit of all electric consumers in Iowa.

Yours very truly,

IOWA PUBLIC SERVICE CO.,
By EDWARD RUISCH,
Vice President.

IOWA ELECTRIC LIGHT & POWER CO.,
By HERBERT HENDERSON,
Vice President.

IOWA-ILLINOIS GAS & ELECTRIC CO.,
By H. A. KLEINMAN,
Vice President.

IOWA POWER & LIGHT CO.,
By J. F. MCLAUGHLIN,
Vice President.

IOWA SOUTHERN UTILITIES CO.,
By C. E. PARKS,
Vice President.

JUNE 19, 1959.

Hon. CARL HAYDEN,
Old Senate Office Building, Washington, D.C.

DEAR SENATOR HAYDEN: Our company, acting as administrative agent for the five utility companies, as set out in our proposal of March 4, 1959, to the Bureau of Reclamation covering the wheeling of hydropower, which companies were represented at the hearing before the Senate Subcommittee on the Public Works Appropriations at 10 a.m., June 19, 1959, wish to supplement our testimony as follows:

"We are willing to enter into a contract with the Bureau of Reclamation to cover wheeling of Missouri hydropower both firm and nonfirm for the preference customers of western Iowa for a period of 20 years in accordance with the standard requirements of the Bureau of Reclamation."

IOWA PUBLIC SERVICE CO.,
EDWARD RUISCH, *Vice President.*

Chairman HAYDEN. Any further statement?
Thank you.
Mr. Holum.

MIDWEST ELECTRIC CONSUMERS ASSOCIATION

STATEMENT OF KEN HOLUM, EXECUTIVE DIRECTOR

GENERAL STATEMENT

Mr. HOLUM. Mr. Chairman, gentlemen of the committee, it is my pleasure to appear before this committee of the Congress representing the Midwest Electric Consumers Association. We are an organization of the consumer-owned electric utilities of the eight States of the upper Missouri Basin that are fully or partly in the power-marketing area of the Bureau of Reclamation.

According to statistics compiled by the Edison Electric Institute, 41 1/10 percent of the electric users in these eight States receive their electric energy from utilities that they own themselves.

While we represent this 41 1/10 percent of the population of eight great States, we make a sincere and, I trust, successful effort to maintain points of view that are in the broad public interest as well.

We appreciate this opportunity to share with you our ideas relative to the orderly and proper development of the Missouri Basin project.

MARKETING AREA MEETING

On December 10, 1958, the Department of the Interior asked its customers in the eastern division of the marketing area to come to Sioux Falls, S. Dak., to confer with Department personnel with respect to power allocations.

At that time the Department's customers were told that the Bureau of Reclamation expected to be able to meet 83 percent of their 1963 requirements in 1965. This deficient allocation is contingent, of course, on keeping all Bureau of Reclamation and U.S. Corps of Army Engineers' Missouri Basin projects on their construction schedules.

We find this an extremely difficult situation. If the rural electric cooperatives, consumer power districts, and municipal utilities are to participate in the benefits of this giant power age, they must build large and efficient generating stations. To do this they must find ways to pool their requirements and exchange power on an equitable and reasonable basis.

To do these things requires time and the cooperation and understanding of the Department of the Interior. If the allocations, as announced December 10, 1958, were to stand, there would not be enough time to do all of the things that have to be done.

The Senate Interior Committee is deeply concerned about our problems. They conducted hearings in 1959 and studies that continued

throughout the year. We employed competent engineering consultants to study these problems of power supply in the eastern division.

ECONOMIC ANALYSIS

The Kulijan Corp. of Philadelphia conducted studies of power availability for us. Later, we employed the firm of R. W. Beck & Associates to make an economic analysis.

These studies established that the Bureau of Reclamation can meet the total preference customer requirements through 1965 by purchasing power from, and exchanging power with, preference customers in the basin.

This is true principally because the State of Nebraska has high summer peaks due to heavy irrigation and air-conditioning requirements, and the other States have high winter peaks.

The R. W. Beck economic analysis established that the Bureau of Reclamation can increase Federal revenues from $750,000 to $1,250,000 annually if it will follow the recommended plan for firming its energy.

Following the Senate Interior Committee hearing, Interior Secretary Fred Seaton announced the appointment of former Senator Arthur Watkins as chairman of a committee in Interior to study Missouri Basin power marketing problems.

On December 1, 1959, the Watkins Committee report, together with memorandum and communications within the Department, were released to the public. It was an excellent report. We were especially pleased to note that the Watkins Committee recommended the purchase and exchange of power to the end the total 1965 preference customer requirements could be met.

We know that the Department has been conducting negotiations. We are uneasy because we have not as yet heard that the Watkins Committee report will be implemented with respect to the firming of available energy. We hope that we shall soon hear that this has been done.

Preference customers in the western division are wrestling with substantially similar problems. As of now, they will have power deficiencies in 1963.

We recognize that hydropower cannot meet our growing requirements indefinitely. We have also recognized that the small municipal utilities and the rural electric cooperatives in our States where rural populations are so widely scattered must plan power supply with great care if the rate payers are not to be severely penalized.

We need the continued assistance of a Bureau of Reclamation that understands and sympathizes with our problems and works closely with us in their solution.

We need them to plan, to negotiate, and to build.

While we do not expect hydroelectric power to continue to meet our rapidly growing requirements, we recognize that it can make its maximum contribution, if it is available, before we have to plan, finance and construct thermal generating stations.

For that reason, we are hoping that a friendly and sympathetic Congress will make available the funds required to complete projects that are under construction as quickly as possible and to build imme-

diately some excellent projects that will certainly be constructed in the near future.

Specifically, we hope that this committee will give favorable consideration to our requests that—

1. Adequate appropriations will be made to keep Bureau of Reclamation transmission lines in Iowa on schedule.
2. Appropriations will be made to start construction at Yellowtail.
3. Appropriations will be made to start construction at Curecanti.
4. Appropriations will be made to start construction immediately of a high voltage, Bureau of Reclamation transmission line from Glen Canyon to Curecanti and 115,000 kilovolts transmission from Flaming Gorge to Oak Creek.

Appropriations will be made available for stepped-up studies of evaporation control on impounded waters.

The projects that I have cited are essential features of a sound program for the development and conservation of the Nation's precious and limited supply of water.

Each will make a contribution toward solving a difficult and vexatious problem of power supply for the consumer owned electric utilities.

Iowa Transmission Lines

In 1959, the Congress approved appropriations for the start of construction of Bureau of Reclamation transmission lines in western Iowa.

We are grateful to the Congress and to this committee for that wise and timely decision. These lines are urgently needed to permit the Iowa municipal utilities and rural electric cooperatives to share in the benefits of Missouri Basin development.

They are needed with equal urgency to expedite exchanges of power during the present critical power supply period.

We trust that the Congress will provide the necessary appropriations to keep this project in schedule.

Yellowtail Damsite

For many years the people of Montana and Wyoming, together with all of the people of the Missouri Basin, have waited for a start of construction at this great damsite.

The basinwide interest was clearly demonstrated when the Missouri Basin States Committee unanimously adopted a resolution at their meeting April 15, 1959, urging its early construction.

Yellowtail's reclamation and flood control features are an important part of comprehensive development of the Missouri and its waters. I am sure they are well known to this committee.

Chairman Hayden. We have heard about them for a long time.

Mr. Holum. Yes; I know you have.

Contributing substantially to Yellowtail's favorable benefit-cost ratio of 1.53 to 1 are the 200,000 killowatts of hydroelectric capacity. Because Yellowtail is near the border between the eastern and western divisions of the marketing area, it can contribute to alleviating acute power shortages in both divisions.

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If construction is started immediately, Yellowtail will make its maximum contribution to the welfare of the preference power users.

We trust that we can expect approval of funds to start this construction.

Curecanti Reservoir

Curecanti Reservoir is an integral component of the upper Colorado River storage project. Although the reservoir is located on the western slope of Colorado, its construction is of vital importance to preference customers on the eastern slope.

We expect the upper Colorado storage project to be interconnected with the western division of the Bureau of Reclamation's Missouri River project. We hope at a minimum that Bureau of the Budget recommendations will be adopted with respect to a start of construction at Curecanti.

Upper Colorado Transmission Facilities

We trust that the Federal Government will decide to finance, construct, and operate the backbone transmission network necessary to deliver upper Colorado power to the preference customer load centers.

We believe that such a decision is consistent with established Federal policy and consistent with our belief that such a program is necessary to make certain that the people secure the maximum benefit from the resources which they own and develop.

If these transmission lines are to be ready when power is available at the hydro plants, we urge the start of construction immediately. We specifically recommend the immediate planning and construction of a 230-kilovolt line from Glen Canyon to Curecanti and a 115-kilovolt line from Flaming Gorge to Oak Creek.

Evaporation Control

The Missouri Basin loses in excess of 1¾-million acre-feet of water annually. Evaporation from the reservoirs equals 4 feet of water per year——

Chairman Hayden. That is mild compared to the evaporation down in Arizona.

Mr. Holum. It is a lot of water, though, in South Dakota.

These losses diminish the amount of water available for domestic and agricultural purposes and for the generation of electric energy.

We understand that studies conducted in our country and abroad indicate that these losses can be effectively and economically reduced.

Because the loss of water directly affects the return to the treasury and the benefits to the area, we believe that studies should be conducted to learn the practicality of reducing this waste. We suggest that funds be made available to the Bureau of Reclamation for this purpose.

Chairman Hayden. A lot of experiments have been going on. They are quite successful, I understand, in small reservoirs. When you get into a large one, with wave action, it breaks up any film over the surface, and it is very difficult to find the right kind of combination that actually will prevent evaporation.

Mr. Holum. We recognize there are differences. We are volunteering one of the reservoirs in the Missouri Basin for continuing studies

on evaporation control. Our water is very short, and this is a waste we should eliminate, if we can.

Chairman HAYDEN. I think Senator Kerr demonstrated by the hearings that he held in various parts of the United States that water is about the scarcest thing we have in America today.

Mr. HOLUM. Yes, sir. The Mid-West Electric Consumers Association believes that water is a precious resource. We believe that good judgment and good economics require that our available water be developed and conserved as rapidly as possible and that after it has been developed every effort should be made to make certain that the benefits of that development run to the people.

In the Missouri Basin, both the eastern and the western division, we are rapidly approaching the time when hydroelectric power cannot meet the rapidly growing requirements of the preference customers.

The hydro potential can make its most valuable contribution if it is available to delay the installation of alternative sources of electric energy.

We further believe that sound public finance requires that projects under construction should be completed as rapidly as possible so as to reduce fixed costs during the construction period and so as to bring the installation productive use at the earliest possible opportunity.

We believe that the recommendations I have submitted, on behalf of our membership, are consistent with these criteria and in the public interest.

Thank you.

Chairman HAYDEN. Thank you, sir.

Mr. Van Pelt?

Miss Dooley?

Mr. Albert Hinley?

SAN PHILIPPI DIVISION OF CENTRAL VALLEY AUTHORITY

STATEMENT OF ALBERT HINLEY, ON BEHALF OF SANTA CLARA-ALAMEDA-SAN MIGUEL WATER AUTHORITY, CALIFORNIA

GENERAL STATEMENT

Mr. HINLEY. Good morning, Mr. Chairman. My name is Albert T. Hinley. I represent Santa Clara-Alameda-San Miguel Water Authority, California, a public agency similar to the one shown on my card, which is another public agency, located generally south of San Francisco Bay, and northerly and easterly of Monterey Bay, including a number of public agencies within the authority.

Our interest is in the $170,000 item for, I believe it is called, the San Philippi division of the Central Valley project, which is a study being carried forward by the Bureau of Reclamation.

I am sure the Senator will recall that the study is being made pursuant to a resolution of the Congress passed in the 2d session of the 85th Congress. It is now Public Law 784 of that Congress. And that one of the features of that resolution which directed that study, and a feature which may commend it to you sympathetically, is that the Federal Government is not to expend any of the sums estimated to be approximately $400,000 for the entire study, unless and until

a commitment has been made by a local public agency to meet one-half of those costs. That commitment has been made by the tri-county authority which I represent; and, the contract having been entered into, some $55,000 has been already spent by the authority. That is, that amount of money has been turned over to the Bureau for its use. And the authority is prepared, and in fact has already in hand, the full amount necessary to meet its final obligations for the study.

It remains then only for the Bureau to come up with its share, as it were, which is the amount which is before this committee for approval.

We therefore urge, with the greatest sincerity and earnestness, that the approval be given at this time.

I want to thank the committee very much for allowing me to appear before you. I have been brief in order to conserve time. But I am entirely at your service, if there are any questions.

Chairman HAYDEN. Well, we thank you for your appearance.

Representative Kilgore.

REHABILITATION LOANS FOR LOWER RIO GRANDE VALLEY

STATEMENT OF HON. JOE M. KILGORE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

PREPARED STATEMENT

Representative KILGORE. Mr. Chairman, members of the committee, I surely appreciate this opportunity to appear before you briefly in support of three budgeted items, all three involving rehabilitation loans for irrigation districts in the lower Rio Grande Valley of Texas.

The Senator is familiar with them from appropriations in the past, and our prior hearings on them.

I have a statement I would like to submit from the manager of the Mercedes Water District. This district has a reclamation project in progress. This is an appropriation within the budget of $2,500,000 for the continuation of that project.

Chairman HAYDEN. It will be included in the record.

(The statement referred to follows:)

STATEMENT OF W. B. PARISH, GENERAL MANAGER OF THE HIDALGO AND CAMERON COUNTIES WATER CONTROL AND IMPROVEMENT DISTRICT NO. 9, MERCEDES, TEX.

Gentlemen, this statement is submitted in support of an appropriation to provide for the continuation of the rehabilitation of the Mercedes division of the lower Rio Grande rehabilitation project authorized under Public Law 85-370.

The Bureau of the Budget has recommended that $2,500,000 be appropriated to carry on the work on this project during the fiscal year 1961. We feel that this amount is adequate and that the work can be carried on at the maximum practicable rate if such funds are provided.

The reconstruction of the canal and drainage systems of our district is well underway and the anticipated savings in water and maintenance costs are already being accomplished in that portion of the district where work has been completed.

It is most important that the rehabilitation of our irrigation and drainage systems proceed without interruption until the job has been completed. The water available for use on the lands in our district will continue to be inadequate until the reconstruction of the canal system is substantially completed. How-

ever, the prospect of an adequate water supply in the foreseeable future has already stimulated the planting of citrus and other nonsupport crops.

Again, we respectfully urge that favorable consideration be given to the appropriation of funds in the amount of $2,500,000 for the successful completion of work scheduled for the fiscal year 1961.

DONNA IRRIGATION DISTRICT

Representative KILGORE. I have representatives here from the other two projects—one of which projects is an approved small project rehabilitation loan, and the budget recommendation for this year contains an item to begin the project. And that, Mr. Chairman, is the Donna Irrigation District.

Their manager and consulting engineer are here with a statement. They would be pleased to either paraphrase it or submit it for the record, whatever the committee would like.

Chairman HAYDEN. We would be delighted to have it.

Representative KILGORE. The manager of the district is Mr. Roger V. Ray, of Donna. He has with him Mr. I. B. Sigler, who is a consulting engineer.

Chairman HAYDEN. You can tell us the substance of it.

STATEMENT OF ROGER V. RAY, GENERAL MANAGER OF THE DONNA IRRIGATION DISTRICT, HIDALGO COUNTY NO. 1, DONNA, TEX.

GENERAL STATEMENT

Mr. RAY. First, I would like to apologize for the fact that this was addressed to the House Subcommittee on Appropriations, because we were not aware the Senate was going to consider it, and we didn't have time to prepare the additional copies of it.

My name is Roger V. Ray, manager of the district.

We are asking for an appropriation for a loan of $4,067,000 for the rehabilitation of our entire district, which is composed of approximately 40,000 acres. If you will please permit me, I would like to just deal in round figures.

Chairman HAYDEN. Surely.

Mr. RAY. There are approximately 40 acres in our district, which is served by this irrigation system. Approximately one-half of this system will be completely rehabilitated with new facilities.

Chairman HAYDEN. How long ago was it originally built?

Mr. RAY. That portion of the system, major portion of it, has been in existence about 50 years. And it is largely in the same state that it was when it was first built.

Chairman HAYDEN. If you rehabilitate it, you can save water?

LIMITED WATER SUPPLY

Mr. RAY. Yes, sir; that is the primary reason for it—because our water supply has become so limited, at the present time we have as much water as we will ever have in the future. It behooves us to do everything we possibly can to conserve that water, and make it go as far as it will possibly go, and in addition it will permit us to irrigate far more of those acres that now are not getting the proper amount of water.

We now have a bonded indebtedness of $260,000 which we are liquidating at the rate of $70,000 a year, and we have $50,000 in escrow in interest and sinking fund. Therefore, we anticipate we will liquidate this in a maximum of 3 years, which will be liquidated prior to the time of the repayment of the loan, if it is granted.

By applying that $70,000 a year, the landowners are now paying in, it will be a big percentage of our annual repayment. That plus the savings in our water, which will mean additional revenues and more water sold—that plus additional land which will come into production, both from recovery of land by eliminating these eastern canals, and also the elimination of seepage, which is one of our biggest problems. Those three will easily make up the amount which has been scheduled for the annual repayments.

SEEPAGE PREVENTION

Chairman HAYDEN. They have discovered some kind of a new compound that they claim you can put in the water and it will prevent seepage.

Mr. RAY. Yes, sir; I just a few days ago read of that. I don't know whether it is still in the experimental stage.

Chairman HAYDEN. Well, they are experimenting with it in the Salt River Valley.

Mr. RAY. I know nothing about the cost of it or how practical it is.

Chairman HAYDEN. There is a possibility there that may save us considerable money.

Mr. RAY. Of course, in our proposed plan, we hope we will be able to replace these earthen cables with heavy wall gasket type pipelining, which from experience has proven—we know of instances where systems have been down for 5 years and have had no maintenance at all. Well, that is one of the big factors we are particularly interested in, is the elimination of that expensive maintenance cost. We plan only to line our earthen mains. And incidentally, I might add that presently we have approximately half of our systems already lined.

That was done back in the mid-1930's from an RFC loan. And, of course, the remaining amount of indebtedness now is paying off the bonds which were used to retire that.

Chairman HAYDEN. I just have a hunch about the thing, but I think this preparation they put in the water will probably work better on a smaller lateral than on a big canal.

Mr. RAY. I understand it has been recommended for small reservoirs, too.

We have prepared quite a bit of statistical information accompanying this, which Mr. Sigler, our consulting engineer, is thoroughly familiar with, much more so than I am. And if there should be any questions you wish to ask about it, we would be glad to clarify those now for you.

Incidentally, another point in regard to this—we have had our election, of course, and we have signed the contract with the Bureau, and it has been validated, and now we have reached the point where we are ready to begin construction, if our appropriation is granted.

We have no known opposition to the program. In fact, we have almost daily, I am sure that at least six of the landowners, most every

day, six different ones are asking me: "When are we going to get started?" So they are very anxious.

In this election, 93 percent of the votes were cast for it.

LANDOWNERS' APPROVAL

We know in any election, any type, there are going to be some errors in casting votes, so we feel like a conservative 5 percent probably voted against it. So we feel we have an overwhelming majority of the landowners really anxious for it to get underway. Now I feel that I have taken a lot of time. But if there are any questions, I would be glad to try to answer them.

Chairman HAYDEN. We thank you for your statement.

Mr. RAY. Thank you, sir. We certainly appreciate the opportunity of appearing before you.

(The statement referred to follows:)

STATEMENT BY DONNA IRRIGATION DISTRICT, HIDALGO COUNTY, NO. 1, TEXAS, IN SUPPORT OF SMALL RECLAMATION PROJECTS ACT LOAN APPLICATION

DONNA, TEX.

To the Honorable Members of the House Appropriation Subcommittee on Public Works, House of Representatives, Washington, D.C.

GENTLEMEN: My name is Roger V. Ray. I am general manager of the Donna Irrigation District, Hidalgo County, No. 1, Donna, Tex., which is an irrigation district composed of approximately 43,000 acres of irrigated land in Hidalgo County, in the 15th Congressional District of Texas.

Mr. I. B. Sigler of the engineering firm of Sigler, Clark & Associates, engineers for the Donna district, is present for this hearing. Attached to, and made a part hereof, is his testimony embracing the details of the proposed project, statistical information concerning physical properties now in existence, proposed replacements, water diversion information, acreage within the district, estimated costs of construction, benefits to accrue to district and landowners, revenues and expenditures, and annual repayment plan based upon accrued benefits after rehabilitation.

The lands in this particular district are intensely cultivated, and in many instances three crops per year are removed from any given acreage. The climate is semitropical and semiarid in nature, and favorable for the production of citrus fruits, truck crops and field crops in general. Rainfall is undependable, and the entire economy of our district is fully dependent upon irrigation water diverted from the Rio Grande River. Cultivation is intense, cost of production is high and the fluctuation of market prices, all stress the necessity of providing an irrigation system which is highly efficient, providing modern adequate facilities for a high degree of water conservation, and delivery to all points within the district at a minimum cost.

A large section of the district's facilities consist of antiquated earthen canals and laterals, to which no changes have been made since first constructed, in most instances, 50 years ago. It is estimated that one-half of the district is served by such a distribution system. This is the portion which we propose to rehabilitate. Water losses through this system either from seepage, evaporation, or escape through facilities, at times approximate 40 percent of our river diversions.

For all times in the future our source of water supply will be limited to no more than our present volume, and any loss through an inadequate, wasteful, and costly system, leaves that much less for insuring the production of profitable crops after planting. The entire economy of the district and dependent communities is adversely affected as a result of the degenerated system. Costs of maintenance are high, resulting in our inability to lower water charges and assessments necessary to operate the system. You will note under table 2, part 2, that our 5-year average, ending in 1957, requirement for water to irrigate an acre of land was 0.811 acre-foot. During 1958 this reached a requirement of 0.98 acre-foot. Other districts in this area, which have modernized their

systems have lowered their requirements to an enviable level of 0.5 to 0.6 acre-foot.

The amount of the difference between our demand factor and that of rehabilitated districts is startling when projected to all cultivated acres. This difference represents wasted water which is lost and cannot be recovered. This water, if retained by a rehabilitated system, could result in an additional 30,439 acres irrigation. The stoppage of seepage from our system is expected to permit the return to productivity of considerable acreage of marginal land, and the improvement of hundreds of acres now being affected to a lesser degree.

In 1935 an improvement program was put into effect which involved roughly one-half of the district. This portion of the system, although suffering from lack of proper maintenance, remains in fair condition. Work has been underway during the past 18 months, financed from our operating funds, to restore this system to top efficiency. Approximately $100,000 has been spent to date. A portion, $81,200, of the requested loan is designated for the completion of this work. It is anticipated that all sections of our system will be completely reworked, and be in top condition at the conclusion of the proposed rehabilitation period of 3 years. Every effort is being made to either eliminate the necessity of frequent maintenance, or, to rebuild so that maintenance can become largely mechanized. This will ultimately result in lower costs to landowners and water users.

It is anticipated and planned that the indebtedness in the prior rebuilding program will be liquidated within the next 3 years. There now remains an indebtedness of some $260,000, which is being reduced at an average rate of $70,000 per year. There is on deposit $50,000 as required under the bond covenant. This indebtedness will be completely eliminated before the repayment date of funds requested from the Federal Government begins, as outlined in the repayment schedule. It is anticipated this amount of $70,000 now being paid on outstanding bonds will be diverted to the repayment of the requested loan, plus increased revenue from additionally conserved water sold, plus decrease in maintenance costs, plus revenue from restored lands, shall amply provide funds for annual repayments. This shall in no way affect available funds for continued proper maintenance and operation.

There is no known opposition from the landowners of our district to the requested loan and the ensuing obligation. The election providing authorization to enter into such contract with the Bureau of Reclamation was 93 percent in favor for such contract. There was no opposition during the validation of this contract. Daily we are queried by property owners as to when our project will begin. It is apparent that all realize the advantages. They are fully informed of the repayment obligations, yet they have no doubt regarding our ability to repay.

The urgent necessity of these improvements is so vital, this agricultural area must be provided with modernized and highly efficient irrigation facilities without delay in order to compete, or possibly, to survive. The opportunity to accomplish this is provided in the advantages offered by the Small Reclamation Projects Act of 1956. Any other type of financing to produce the necessary rehabilitation is definitely beyond the ability of the district to repay, without the creation of extreme hardship to the landowners and water users.

The taxpayers and property owners in our district respectfully submit that the loan request will be approved by this committee.

Respectfully submitted.

DONNA IRRIGATION DISTRICT, HIDALGO COUNTY, NO. 1,
ROGER V. RAY, *General Manager*.

STATEMENT SUBMITTED IN BEHALF OF DONNA IRRIGATION DISTRICT, HIDALGO COUNTY, NO. 1, TEX.

The Donna Irrigation District, Hidalgo County, No. 1, Tex., has applied for a loan in the amount of $4,067,000 under the "Small Reclamation Project Act." The proceeds of this loan will be supplemented by an ammount of $333,000 contributed by the Donna Irrigation District, to rehabilitate the irrigation facilities now owned by and within the boundaries of the district. A summary of the proposed improvements is given below:

1. Rehabilitate and enlarge or rebuild the river pumping plant to a capacity of 440 cubic feet per second.

2. Rehabilitate and enlarge the relief pumping plant, No. 3, to a capacity of 340 cubic feet per second.

3. Rehabilitate the main canal system, increasing the capacity, lining sections of the canal, and replacing open canals with pipelines.

4. Rehabilitate the lateral distribution system by replacing about 57 miles of open earthen laterals with concrete pipe, repair and raise existing concrete-lined sections where required and utilize the 16 miles of existing pipeline. Also, construct three relift pumping plants, Nos. 4, 5, and 6 in the distribution system to provide additional head required in the distribution system.

5. Purchase portable impeller-type recording water meters for measuring the water during delivery of the farm turnouts.

6. Clean out all existing drainage ditches and repair or enlarge the drainage culverts as required.

BENEFITS TO BE DERIVED FROM THE REHABILITATION PROJECT

1. The ability to provide irrigation to all the land in the district in a much shorter time than the present facilities permit.

2. Increased diversion and delivery facilities will facilitate the capture of a larger quantity of "free water" occurring due to rainfall runoff into the river below Falcon Reservoir, or due to rainfall in portions of the irrigated area, resulting in water in transit being otherwise lost to the Gulf of Mexico.

3. Decreased maintenance costs.

4. A more dependable river pumping plant than the present one.

5. Reclamation of land now damaged by seepage from earthen canals.

6. Improvement in the economy of the grower due to the ability to irrigate a larger proportion of his acreage. This will be made possible by decreased water losses.

Attached are tables giving summaries of diversions, construction costs, and other data pertinent to the project.

Respectfully submitted.

I. B. SIGLER,
Engineer for Donna Irrigation District.

TABLE 1.—*Miles of canal system*

	Lined	Earthen	Pipeline	Total
Main canals:				
Present system	6	27¾	¼	34
Proposed system	25	4¾	2½	32¼
Laterals:				
Present system	57	57	16	130
Proposed system	57	----------	73	130

TABLE 2.—*Annual net diversion and acre irrigations*

	1953	1954	1955	1956	1957	Average for 5-year period
Annual net diversion, acre feet	29,317	67,260	83,415	59,918	40,591	----------
Acre irrigation	24,788	84,972	113,056	81,838	41,368	----------
Diversion per acre irrigation, acre-feet	1.18	.792	.737	.732	9.81	0.811
Diversions per acre-foot irrigated:						
Hidalgo County District No. 7, acre-feet	----------	----------	----------	----------	----------	.6
Hidalgo County District No. 2, acre-feet	----------	----------	----------	----------	----------	0.5-.6
Hidalgo County District No. 6, acre-feet	----------	----------	----------	----------	----------	.586

TABLE 3.—*Acres of land in Donna district*

	Under cultivation and irrigation	Not under irrigation	Present acreage total
Irrigable land (not in floodway)	29,644	5,169	34,813
Floodway land (estimated)	1,375	740	2,115
Canals, roads and city property		5,590	5,590
Total	31,019	11,499	42,518
Acreage now under flat rate and cultivation			29,644
Irrigable land restored to production (estimated)			3,500
Irrigated land in floodway			1,375
Total land requiring irrigation			34,519

TABLE 4.—*Estimated construction costs*

1. River pumping plant	$313,200
2. Relift pumping plant	56,800
3. Main canals	1,610,400
4. Laterals	2,020,900
5. Farm metering	130,500
6. Repairing and raising existing lining	81,200
7. Drainage	87,000
Total estimated construction costs	4,300,000

TABLE 5.—*Effect of rehabilitation program*

Total net diversions for 3-year period (1954, 1955, 1956)—acre feet	210,593
Average net diversions per year for 3-year period—do	70,197
Total annual acre irrigations, at 0.811 acre-foot per acre irrigation	86,556
Total annual acre irrigations, at 0.60 acre-foot per acre irrigation	116,995
Number acres irrigated 4 times per year, at 0.811 acre-foot	21,639
Percent of total of 34,519 acres requiring irrigation	62.7
Number acres irrigated 4 times per year, at 0.60 acre-foot	29,249
Percent of total of 34,519 acres requiring irrigation	84.7

TABLE 6.—*Cost and advantage to landowner*

Total amount of loan requested	$4,067,000.00
Average annual repayment, 35 years	116,200.00
Average annual repayment per acre on 34,519 irrigable acres	3.37
Cost and advantage to 100-acre landowner:	
Annual cost	337.00
Acres irrigable at present use (0.811)—acres	62.7
Acres irrigable at 0.60 use—do	84.7
Increase in acreage—do	22.0
At annual average net income of $30 per acre—Increased net income to grower	$660

TABLE 7.—*Operating revenue and expenses*

	Total revenue	Total expense	Net revenue
Fiscal years:			
1954	$319,797	$216,549	$103,248
1955	332,687	256,479	76,208
1956	253,761	203,693	50,068
1957	179,126	147,872	31,254
Average	271,343	206,148	65,195
Estimated after rehabilitation	348,900	179,815	169,085

Annual repayment cost	$116,200
Annual gain in average operations	103,900
Net annual cost	12,300

GENERAL STATEMENT

Representative KILGORE. Thank you very much, Mr. Chairman.

Here representing the La Feria Water District is the president of their board, Mr. R. M. King, of La Feria, who has a short statement. He is accompanied by Mr. George Shimek, a member of the board; Mr. Bob Hensley, of La Feria, the manager of the district; and Mr. Arthur Klein, their attorney.

Mr. Chairman, this is a regular rehabilitation program, as contrasted with one under the Small Project Act. This is a budget-submitted item to begin that project.

Incidentally, this district lies between two irrigation districts that have rehabilitation projects underway. This committee was kind enough in prior years—last year and the year before last—to afford funds to the adjoining districts to begin their rehabilitation project.

Chairman HAYDEN. We would be glad to have an outline of what you are doing.

STATEMENT OF R. M. KING, PRESIDENT OF THE BOARD OF DIRECTORS OF LA FERIA WATER CONTROL AND IMPROVEMENT DISTRICT, CAMERON COUNTY NO. 3

GENERAL STATEMENT

Mr. KING. Let me say first we have one of the oldest districts in the valley. It is 50 years old. There has been little improvement over the years. We are kind of operating on a horse and buggy in the jet age. At the present time, we are pumping 3 acre-feet of water for every acre we water, which is a criminal waste of water.

You know that. And the feasibility of the Bureau of Reclamation, their engineers, over a short period, the ratio of benefit to cost was 1.4; and over the period of payment it was 3 for 4. So we rely on them. We think they have the best engineers in the world.

Would you want me to read my statement here, or have a copy?

Chairman HAYDEN. You can file it. I think that you are in a very good position.

Mr. KING. We are not. We are making an application. You see, it is under $5,750,000. The total loan. And $500,000 of it for the fiscal year 1961 has already been approved by the Bureau of the Budget. We feel like it is essential that we should have this.

Chairman HAYDEN. What crops do you grow?

Mr. KING. Cotton, citrus, and vegetables. And since 1951—we froze out in 1951. Practically all our citrus. It is coming back into production now.

I think that covers about the proposition.

I will say this, too. We have some disgruntled members opposing this. They admit it is a necessity.

Chairman HAYDEN. Well, sometimes it is very difficult to get everybody to agree. I never ran in an election and got all the votes.

Mr. KING. We had one election. And then the final election was carried by a majority of the water users, and the majority of them are in favor of the project.

Representative KILGORE. Mr. Chairman, the minority group has been in touch with me, naturally, as you would understand with our prolonged experience in this field.

Chairman HAYDEN. Well, there are always some objectors, and they have a right to present their views.

Mr. KING. That is right.

Are there any questions you would like to ask?

Chairman HAYDEN. I have nothing more.

Representative KILGORE. Thank you very much, Mr. Chairman, for your kindness in hearing us on such short notice.

Chairman HAYDEN. Mr. King's prepared statement and the resolution of the board of directors of the La Feria Water Control and Improvement District will be included in the record.

(The materials referred to follow:)

STATEMENT OF R. M. KING, PRESIDENT OF THE BOARD OF DIRECTORS OF LA FERIA WATER CONTROL AND IMPROVEMENT DISTRICT, CAMERON COUNTY NO. 3

Mr. Chairman and members of the committee, my name is R. M. King. I am president of the board of directors of the La Feria Water Control and Improvement District, Cameron County No. 3. I am a farmer and have farmed in the La Feria Water Control and Improvement District for the past 40 years. I am here to request and to urge the Committee on Appropriations to include in its appropriations the $500,000 recommended by the Bureau of Budget and the Bureau of Reclamation for the La Feria division, Lower Rio Grande rehabilitation project, Texas, for the fiscal year beginning July 1, 1960.

The Bureau of Reclamation made a recommendation for this rehabilitation project known as La Feria division, Lower Rio Grande rehabilitation project, Texas. The State Board of Texas Water Engineers and the Governor both approved the project as feasible, and the majority of the qualified voters in the district voted to enter into a contract with the United States of America for a loan of $5,750,000 to be repayable over a period of 35 years.

In order to properly prepare ourselves for this much needed project, we have spent and obligated ourselves to spend an estimated $40,000 and there is now in progress a soil evaluation project which the district is paying for that is being handled by the Bureau of Reclamation in order that the engineers might properly design and make plans for the rehabilitation of the distribution system of our district.

At the present time we have an urgent need for four engines, two on the Rio Grande and two on the second lift pumps, that will cost an estimated $125,000. Now that we have entered into a contract with the United States of America we have no other means of getting these pumps since all of our assets are mortgaged to the United States. This appropriation is for a loan, not a gift, and we have already entered into a contract with the United States of America for the loan. The contract has been approved by the courts and validated without opposition by our State courts and we have relied upon the terms of our con-

tract and made certain expenditures which were necessary on our part. May I add that we cannot get money from any other source at this time because we have entered into the contract with the United States of America and all of our assets now are pledged to the United States for this loan.

We feel very strongly that this rehabilitation project is a necessity and now it is an immediate necessity in order to conserve and to preserve water for irrigation purposes.

We feel that Congress should carry out the terms of the contract based on the recommendations of the Bureau of Reclamation and the Bureau of Budget and appropriate the $500,000 for this loan for the fiscal year beginning July 1, 1960.

I cannot overemphasize the necessity for immediate relief in the matter of money for our pumps. In the event that the pumps are not installed and in the event that they break down and we have a dry year, it will mean disaster among our farmers in our district, and remember, our means of financing the purchase of pumps are limited by virtue of the contract that we have entered into with the United States of America, which contract has now been approved by the State courts as a binding and valid obligation, not only upon the part of the district, but also the United States.

In conclusion, we respectfully request and urge the committee to include in its appropriation the $500,000 as recommended by the Bureau of Reclamation and the Bureau of Budget. We are relying upon this appropriation and need it for this year.

Our board of directors has passed a resolution urging this appropriation and I attach it hereto with my statement.

RESOLUTION OF THE BOARD OF DIRECTORS OF LA FERIA WATER CONTROL AND IMPROVEMENT DISTRICT, CAMERON COUNTY NO. 3

Whereas the La Feria Water Control and Improvement District, Cameron County No. 3, entered into a contract dated December 7, 1959, with the United States of America (Bureau of Reclamation), for the rehabilitation of its facilities in the total amount of $5,750,000; and

Whereas said contract has been approved and validated by the courts of the State of Texas as of February 1, 1960; and

Whereas there is a definite, urgent need for rehabilitation of the distribution facilities in the La Feria Water Control and Improvement District, Cameron County No. 3, in order to maintain adequate distribution of waters for irrigation of lands within the district; and

Whereas there is an urgent need at the present time for the installation of engines and facilities to pump water out of the Rio Grande and for the second lift pumps in order to properly distribute water throughout the district; and

Whereas there is a request for appropriation of $500,000 made by the Bureau of Reclamation included in the Bureau of Budget's recommendation for the fiscal year beginning July 1, 1960, on said contract between the district and the United States of America; and

Whereas the board of directors of said district desire to urge and respectfully request the Appropriations Committee of the House of Representatives, 86th Congress, to appropriate the sum of $500,000 for the fiscal year beginning July 1, 1960, for the rehabilitation project known as La Feria division, lower Rio Grande rehabilitation project, Texas: Now, therefore, be it

Resolved, That the board of directors of the La Feria Water Control and Improvement District, Cameron County No. 3, does hereby request and urge the Committee on Appropriations, House of Representatives, 86th Congress, to appropriate the sum of $500,000 for the fiscal year beginning July 1, 1960, as an advance on the contract between the La Feria Water Control and Improvement District, Cameron County No. 3 and the United States of America (Bureau of Reclamation) as recommended by the Bureau of Reclamation and included in the Bureau of Budget's request for appropriations.

R. M. KING, *Chairman.*
GEORGE D. SHIMEK,
Secretary.
EDWARD J. WOLF,
Member.

CERTIFICATE

STATE OF TEXAS,
County of Cameron:

I, George D. Shimek, secretary of the board of directors of La Feria Water Control and Improvement District, Cameron County No. 3, hereby certify that the above resolution was duly passed at a special called meeting of the board of directors held on April 4, 1960, in the office of La Feria Water Control and Improvement District, Cameron County No. 3 in La Feria, Tex.

Witness my hand and seal of said district this the 4th day of April 1960.

GEORGE D. SHIMEK, *Secretary.*

LETTER FROM REPRESENTATIVE KILGORE

(NOTE.—The following letter was received from Representative Kilgore prior to printing, and is included in the record at the direction of the chairman.)

HOUSE OF REPRESENTATIVES,
Washington, D.C., April 13, 1960.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This is with further reference to my appearance before your subcommittee on the Bureau of Reclamation and Interior power marketing agencies on April 7, when you were presiding, in connection with the budgeted request for $500,000 for the La Feria, Tex., Water District rehabilitation project, Bureau of Reclamation.

You will recall at that appearance of Mr. R. M. King, the president of the La Feria, Tex., Water District, said in his testimony that there was opposition to that project. The opponents, however, were unable to appear at the House hearings and, of course, at the Senate hearings which were arranged only a matter of a very few hours before our appearance before your subcommittee at 11 a.m. on April 7.

Mr. Murray Godfrey and Mr. Alfred Bonn, both of Harlingen, Tex., and property owners within the confines of the La Feria Water District are the leaders of the opposition to this project. They sent me a telegram to present to the House Appropriations Committee stating their opposition. They have asked me to make the same telegram available to you for your committee's consideration in the study of this project.

A copy of that telegram is attached hereto for your consideration and inclusion in the record of the testimony on this project.

Thanks for your cooperation in this instance and on the many times in the past when your committee has studied projects from the area I represent.

Respectfully yours,

JOE M. KILGORE.

HARLINGEN, TEX., *April 6, 1960.*

Hon. JOE M. KILGORE,
Representative from Texas, Old House Office Building, Washington, D.C.
(To be read to the members of Appropriations Committee, Washington, D.C., re hearing April 7, 1960, Public Works Subcommittee, reclamation project, La Feria Water District, Cameron County, Tex.)

DEAR SIRS: We regret we are unable to accept your appreciated invitation to above hearing. This letter is being written to portray a true picture of local conditions.

As in the case of any unpopular and unmerited movement this project has been given as much sparkle and glorification as possible. However, it still remains the same hideous and monstrous scheme in the eyes of the everyday farmer who will eventually lose his holdings in his efforts to pay for it.

Many of the proponents of this project are losing ground financially. Apparently they want to saddle us with an unbearable indebtedness and take us downstream with them. Being the younger farmers we are of a progressive nature and have a clear understanding of our capabilities and realize it would

be impossible to repay a loan of this magnitude. However, we can and will fight our way out of this dilemma if this appropriation is rejected.

These are the undisputed facts that will interest this committee. A $6 million debt is far too great to be placed on this small acreage. Even the expenditure of $6 million will leave much of the most important work untouched. This loan is being discussed when the returns from general farming are so poor that this loan cannot be repaid. Labor troubles are worsening daily. Water shortages have occurred only once or twice in 40 years and this was caused by general drought.

Although the bond election was defeated once, it carried the second time against the wishes of the farmers when the city vote and especially the vote of the aged was solicited by the proponents. Of course, the salaried people and the aged expect to pay very little of this debt. If this loan is approved instead of being a bonanza will prove to be the greatest catastrophe ever to befall this section. Therefore, the only way you the members of the Appropriation Committee can help the farmers is the reject and rescind the bill containing the $6 million appropriation to the La Feria Water District.

TAX PAYERS' COMMITTEE OF THE
LA FERIA WATER DISTRICT.
MURRAY GODFREY, *Chairman.*
ALFRED BONN, *Secretary.*

PREPARED STATEMENT

Chairman HAYDEN. A statement by Senator Yarborough pertaining to various reclamation projects in Texas will be included in the record.

(The statement referred to follows:)

STATEMENT BY SENATOR RALPH W. YARBOROUGH

Mr. Chairman, with respect to new project starts, going construction, construction programs, construction and rehabilitation programs such as the lower Rio Grande rehabilitation projects, the San Angelo project, and other particular subjects in the Texas area, I wish to recommend the attached list of projects for your consideration. I recommend a favorable report on all of these items. These items deal with the subjects included in the reclamation appropriations starting at page 669 of the printed budget of the U.S. Government, for fiscal year ending June 30, 1961.

I support these requests. However, from information supplied to my office, it appears that most of the items on the list can be accelerated at a substantial saving to the public. For example, if projects were scheduled for quicker completion, it is estimated that substantial charges could be saved on rising labor and material costs and on interest charges.

In conclusion, Mr. Chairman, I am supporting and recommending for your approval a minimum of over $19 million for Texas projects for fiscal year 1961, the largest of which is the San Angelo project for $11 million. Donna irrigation is scheduled for over $4 million and Rio Grande-Mercedes for $2.5 million.

I urge that these schedules be accelerated, for important savings can be made on construction costs and financing charges. The urgent needs of cities, towns, and communities must be met in the near future. These appropriations must be increased rapidly in order to accommodate the rapidly expanding Texas population, which will grow from a reported 8.5 million in 1955 to an estimated 13 million in 1980.

I attach a list of the individual projects.

I recommend your approval of the following projects in particular:

Rio Grande:	
La Feria	$500,000
Mercedes	2,500,000
San Angelo	11,000,000
Donna irrigation	4,061,000
El Paso County Water Improvement District No. 1	575,000
Texas Basin studies and work [1]	458,000
Liberty Bottoms	6,700
Rio Grande Compact Commission	11,000
Goodland project	12,100
Prairie Dog-Town Fork and Salf Fork of Red River	50,300
Falcon Dam	5,000
Elephant-Butte power	26,120

[1] See statement immediately following.

TEXAS BASINS PROJECT, TEXAS

Mr. Chairman, the purpose of requesting this appropriation is to continue the investigation of the overall plan for water use and control which will provide for optimum development of the water resources and the natural resources of the gulf coastal areas of Texas.

The coastal area of Texas embraces the drainage basins of Texas of the Sabine, Neches, San Jacinto, Trinity, Brazos, Colorado, Guadalupe, Nueces, and lower Rio Grande Rivers.

Mr. Chairman, in the engineering studies first proposed, $658,000 was scheduled for use in the fiscal year 1961. The administration has reduced this amount to $458,000. The Reclamation Bureau currently has a well-organized staff in the State of Texas and this personnel has become accustomed to the particular needs of this project and has been engaged on this survey for the past 4 years.

The reduction and displacement of this work force would result in a turnover of manpower and a serious financial loss to the overall project.

Last year this project was included in the budget under the title of "Gulf basins project, Texas." Due to the insistence of the Texas Study Commission, this was changed to Texas basins project.

As indicated above, this investigation was started about 1956. Reconnaissance had been completed on land classifications for about 5 million acres. These sites were selected as potential irrigable areas. Detailed land classifications on about 110,000 acres had ben made and from these classifications, a foundation for the exploration at dam and reservoir sites can be made. The total estimated cost for the survey investigation was placed at over $4 million. The cost of the project through 1958 was about $2½ million, of which about $965,000 had been utilized to provide for the overall plan of development and for feasibility investigations on the Columbus Bend project.

Mr. Chairman, I understand that the Columbus Bend project will go forward in this appropriation and I also urge that the Hochheim project on the Guadalupe and Blanco Rivers also be accelerated. In addition, the Falls City unit, which is located on the San Antonio River about 45 miles south of the city of San Antonio, should be accelerated along with these other two projects. This project was authorized under Public Law 85–843.

In preliminary conclusion, Mr. Chairman, this is one of the major projects devoted to the conservation of water and natural resources in the history of Texas and the Southwest. The overall, long-term estimate on the cost of this project is $1,500 million. It is hoped that the full survey can be completed and reported to the Congress by 1963.

On this basis, the total project has a probability of being completed over the next 20-year period.

However, various entities in this program proceed at much faster rates, or as soon as general investigations and surveys are completed. In the course of completing the overall project, it is planned to connect the various major rivers of Texas by interlocking canals, which would allow the water from one system to be switched into another system. In this way, water from the heavy rainfall areas of east Texas could be directed to the drought areas of the southwest part of the State whenever feasible.

Mr. Chairman, I recommend that the members of the Appropriations Committee allow the project to proceed on the schedule estimated in the budget of 1960. A reduction, in the amount of $200,000 would seriously cripple this entire program from the standpoint of cost and from the standpoint of the highly trained personnel that has worked on these matters for the past 4 years. Your most earnest consideration of the above recommendations will be very much appreciated.

LOWER RIO GRANDE REHABILITATION, MERCEDES DIVISION

Mr. Chairman, I would like to again emphasize the need for accelerating the Mercedes project. I do this in part because the costs have been increasing at the estimated rate of approximately $500,000 per year due to the upward trend of the cost of labor and materials. Hence, it is clear that a great saving can be made if this project can be completed at an early date. Furthermore, if this project can be completed at an early date, it will avoid the displacement of the work force and the residents of the area. I respectfully urge that you continue the funds for rehabilitation and irrigation and the funds for the drainage works for fiscal year 1961 in the amount of at least $250,000.

LOWER RIO GRANDE REHABILITATION, LA FERIA DIVISION, TEXAS

Mr. Chairman, I wish to recommend that the La Feria division be granted an appropriation of $500,000 for fiscal year 1961. The rehabilitation and improvement of these irrigation facilities is needed at the present time. In addition, maintenance equipment is seriously needed and work on the pumping plants and the laterals are in need of attention.

The general purpose is to provide a full water supply for the irrigation of over 26,000 acres through complete rehabilitation of deteriorated facilities.

SAN ANGELO PROJECT, TEXAS

Mr. Chairman, the project is designed to develop 10,000 acres of newly irrigated land. San Angelo and the surrounding areas will benefit from this development.

I would again like to call the attention of the committee to the fact that the city has agreed to assume the repayment of the costs on irrigated farms, which exceed the repayments schedule of the farmers. This principle will place the project on a sound financial basis.

I urge the committee to fully support these budgeted requests of $11 million for fiscal year 1961. By doing so, construction can be continued on the Twin Buttes Dam and Reservoir and work can be initiated on the main canal and the lateral canal.

At a good saving to general taxpayers, a good part of the irrigation cost is going to be absorbed by the industrial and municipal users. Out of an estimated $11 million cost allocated to irrigation, it is estimated that the farmer and rancher will only be bound to pay about $4 million. The municipal water sales are scheduled to pay the remainder.

Although grain and sorghum are leading crops of the area, substantial alfalfa production is expected with irrigation. This is needed to stabilize livestock feeding in drought years. Droughts have been extreme in recent years.

Mr. Chairman, with respect to new project starts, going construction, construction programs, the San Angelo project, and other particular subjects in the Texas area, I wish to commend the following list of projects for your consideration. I recommend a favorable report on all of these items. These items deal with the subjects included in the Reclamation appropriations starting at page 669 of the printed budget of the U.S. Government for fiscal year ending June 30, 1961.

I support these requests. However, from information supplied to my office, it appears that most of the items on the list can be accelerated at a substantial saving to the public. For example, if projects were scheduled for quicker completion, it is estimated that substantial charges could be saved on rising labor and material costs, on interest charges.

Fiscal year 1961 construction and rehabilitation

(*a*) Lower Rio Grande rehabilitation project, La Feria division (budget item 18, pp. 672, 673):

Fiscal year 1960 program	Planning only
Fiscal year 1961 program	$500,000

The rehabilitation and improvement of irrigation facilities in this division of the project is to be performed at an estimated cost of about $5,772,000. Rehabilitation of these facilities which supply water for the irrigation of about 27,000 acres will be initiated during fiscal year 1961. Construction will include rehabilitation work on the pumping and the laterals. The program also includes the acquisition of maintenance equipment.

This division of the project is in Cameron County in the lower Rio Grande Valley, Tex. Its purpose is to provide a full water supply for the irrigation of 26,660 acres through complete rehabilitation of deteriorated facilities.

(*b*) Lower Rio Grande rehabilitation project, Mercedes division (budget item 19, pp. 672, 673):

Fiscal year 1960 program	$1,467,217
Fiscal year 1961 program	2,500,000

The rehabilitation and improvement of irrigation facilities in this division of the project is being performed at an estimated cost of about $10,800,000. Rehabilitation of these facilities, which supply water for the irrigation of about 68,000 acres, will be continued during fiscal year 1961. Practically all of the activity during fiscal year 1961 will be in connection with rehabilitation of laterals.

(*c*) San Angelo project, Texas (budget item 20, p. 673):

Fiscal year 1960 program	$4,139,026
Fiscal year 1961 program	11,000,000

During fiscal year 1961 construction will be continued on the Twin Buttes Dam and Reservoir and will be initiated on the main canal and laterals. This program needs acceleration.

DRAINAGE AND MINOR CONSTRUCTION

New Mexico-Texas—Rio Grande project, Elephant Butte power (budget item 25, p. 672): The program of $26,120 provides for work required by the Department of Justice in defense of suits as a result of Private Law 767, 84th Congress, Private Law 767 permitted property owners and residents of the town of San Marcial, N. Mex., to file claims against the U.S. Government for damage caused by a flooding of the Rio Grande in 1929, which flooding allegedly resulted from the construction of the Elephant Butte Dam.

Fiscal year 1961 loan program (budget items, p. 676)

Fiscal year 1960 program	$16,204,729
Fiscal year 1961 program	18,437,000

The total U.S. program of $18,437,000 for fiscal year 1961 will provide funds for five new loans to local organizations for the development of small projects, and it will provide funds for the administration of the act and activities of the Bureau of potential loans.

Of this amount, the Texas allocation for a new loan and the funds required for same are as follows:

FISCAL YEAR 1961 LOAN PROGRAM

Mr. Chairman, I would like to recommend the passage of the full amount of appropriation for the loan program for fiscal year 1961. Included in this program is $4,061,000 for the Donna Irrigation District, Hildago County No. 1, Tex.

Construction contemplated includes lining, or conversion to concrete pipe, of about 23 miles of unlined main canal and the replacement of about 57 miles of unlined lateral with concrete pipe. Existing lined canals and laterals and some canal structures also will be repaired, enlarged, or replaced. A main pumping plant from Rio Grande and several relift pumping plants will be reconstructed. All drainage facilities will be cleared and rehabilitated, and metering equipment

and employee housing will be provided. New and rebuilt facilities will provide a more efficient and effective use of the water.

REHABILITATION AND BETTERMENT

Rio Grande, El Paso County Water Improvement District No. 1

Fiscal year 1961 program $575,000

Program provides for completion of rehabilitation activities for River Side diversion dam, Franklin heading, Tornillo heading, Mesilla Valley drains, and general property.

Rehabilitation of other canals, laterals, and drains will continue. Acquisition of construction equipment will be completed.

TEXAS

Rehabilitation and betterment (budget item 26, p. 672)

Rio Grande-El Paso County Water Improvement District No. 1 ..... $575,000

TEXAS—GENERAL INVESTIGATION PROGRAMS (BUDGET ITEMS P. 670)

The proposed fiscal year 1961 investigation program for the State of Texas will provide for continuation of the studies on—

1. Texas basins project $458,000
   Completion of the feasibility investigation.
2. Liberty bottoms project in Oklahoma and Texas 6,700
   Completion of the investigation.
3. Rio Grande Compact Commission: Rio Grande Basin 11,000
   The cooperative work with Rio Grande Basin and others, Texas, Colorado, and New Mexico, will be continued.
4. Goodland project in Oklahoma and Texas 12,100
   A reconnaissance report will be completed.
5. Prairie Dog Town Fork and Salt Fork of the Red River 50,300
   A reconnaissance investigation will be continued.

Texas.—Operation and maintenance: Falcon 5,000

Above the Pecos River Valley in Texas is the McMillan Delta project on the Pecos River in New Mexico.

Just below the Texas-New Mexico State line, there is located the Red Bluff Reservoir, which will be the source of water supply for irrigation in the Pecos area.

Along the reaches of the Pecos River in New Mexico, the salt cedar trees and vegetation rob the irrigation farmers of the Pecos Valley of a great deal of needed water. A program is currently scheduled to provide sufficient funds to continue the project of destroying the salt cedar and to provide for continued cooperative work with the Pecos River Compact Commission.

The salinity alleviation program is urgently needed. I strongly recommend that ample funds be provided for the continuation of the vital work in this Texas-New Mexico area.

In conclusion, Mr. Chairman, the flood control and irrigation funds are urgently needed for the improvement of the Texas area. I urge the Appropriations Committee to fully support all the budget items, and, whenever possible, to accelerate these schedules in order to put these projects into operation at an early date. These funds are needed now also, in order to make savings of various kinds on construction costs and financing charges. These urgent needs of cities, towns, and communities must be met in the near future in order to accommodate the rapidly expanding Texas population, which will grow from 8.5 to 13 million in 1980 according to census authorities.

TEXAS WATER CONSERVATION ASSOCIATION

Chairman HAYDEN. A statement by Mr. J. E. Sturrock, general manager of the Texas Water Conservation Association, will be included in the record.

(The statement referred to follows:)

STATEMENT OF J. E. STURROCK, GENERAL MANAGER, TEXAS WATER CONSERVATION RE APPROPRIATIONS FOR BUREAU OF RECLAMATION FOR FISCAL YEAR 1961

Mr. Chairman and members of the committee, my name is J. E. Sturrock. I reside in Austin, Tex., and I am general manager of the Texas Water Conservation Association, a statewide organization dedicated to the task of promoting the sound and orderly development, conservation, protection, and utilization of the water resources of Texas for all beneficial purposes. The association represents all major classifications of water use including irrigation.

I am very pleased to again have the privilege of appearing before this committee to testify on behalf of my organization in support of appropriations for the Bureau of Reclamation for its investigations in Texas and for construction of the San Angelo project; the Mercedes and La Feria divisions of the lower Rio Grande rehabilitation projects; and the El Paso County Water Improvement District No. 1 rehabilitation and betterment project.

Since the McMillan Delta project on the Pecos River in New Mexico, including the salinity alleviation program, will be of great benefit to the Pecos River Valley water users in Texas, I also appear in support of this project.

The Bureau's Texas investigations are largely concentrated in its Texas basins project investigation, which covers all of the State except the Texas portions of the Red and Canadian River Basins. The investigation has been in progress since 1955 for the primary purpose of developing a comprehensive plan for providing assistance under the Federal reclamation laws for solution of Texas water supply problems. The Bureau's report presenting such a plan originally was scheduled for completion in fiscal year 1961. It has been necessary, however, for the Bureau to reschedule completion of its report for fiscal year 1963 as a result of establishment of the U.S. Study Commission on the Neches, Trinity, Brazos, Colorado, Guadalupe, San Antonio, Nueces, and San Jacinto River Basins and areas under Public Law 85–843, enacted in August 1958. The area covered by the Texas basins project includes the Texas portions of the Sabine and Rio Grande Basins in addition to the area of responsibility assigned to the Commission.

The Commission membership consists of five Federal members—representing the Federal Power Commission and the Departments of Army, Commerce, Interior, and Health, Education, and Welfare—plus a representative from each of the eight river basins and the Texas Board of Water Engineers, together with a non-Federal Chairman. The Commission is charged with formulation of a comprehensive and integrated plan for development of the land and water resources of the area for all purposes and preparation of a report thereon, which is scheduled for completion at the end of fiscal year 1961. The Commission includes adequate representation for all interests and agencies concerned with solution of Texas water problems. It therefore is exceptionally well qualified to coordinate and reconcile the diverse and sometimes divergent views of those interests and agencies.

To provide the coordination of effort required for effective accomplishment of its task, the Commission necessarily must rely heavily on the participating Federal agencies, the Texas Board of Water Engineers, and the various State-constituted river authorities with planning responsibilities to provide essential technical data, plans, and findings in their specialized fields and area of responsibility. Consequently, adequate financing of the programs of the concerned Federal agencies is essential, if the work of the Study Commission is to be fully effective. In addition, these agencies must be enabled to carry on needed planning activities for Texas areas not included in the Study Commission area and for formulation of the more detailed plans that are required in seeking authorization for specific developments.

My association, which includes representation from all fields of water resource development in Texas, strongly supports the programs of the Study Commission and the participating Federal agencies. Both individually and collectively, our membership will contribute everything it can to the success of these programs. One of the primary objectives of the Texas Water Conservation Association from its very inception has been formulation of a truly comprehensive and effective statewide plan for control and development of our State's water resources in the public interest. We now have the necessary tools available for achieving this objective in the various State and Federal agencies. All

that is now needed is adequate financing for these agencies over the next few years. Any delay in completion of a statewide plan due to lack of adequate financing of investigations activities will be costly indeed. Any money that is saved by reductions in current planning funds will be much more than offset by the economic losses our State and the Nation will incur through resulting delays in getting essential projects into construction. Many years are needed for planning, authorization, and construction of major water resource projects. This process must begin soon if we are to avoid economic losses in the 1970's due to failure to solve our water problems. Early development of a generally acceptable statewide plan is an essential prerequisite to initiation of necessary detailed planning for many of the projects that will be needed by that time

This urgent need for expediting planning for development of Texas water resources is the basis for my association's support for the Bureau's Texas basins project investigation. Water supply for irrigation and for municipal and industrial purposes is this agency's special field, and water supply is our State's No. 1 water problem. The results to date of the Bureau's Texas basins project investigation have been provided to the Study Commission for its use and will contribute greatly to speedy and effective completion of the Commission's task. The Bureau's program in turn will benefit greatly from the Commission's efforts. Completion of the Commission's plan and report in fiscal year 1961 will provide an overall long-range planning framework for its area that will be acceptable to all concerned interests and agencies. Within this framework, the Bureau will be able to submit its recommendations for authorization of potential developments suitable for construction under the Federal reclamation laws much sooner than otherwise would be possible. This in turn will expedite authorization and initiation of construction of such developments and solution of our water supply problems.

These objectives cannot be achieved, however, unless the Congress provides the Bureau with adequate funds for completion of the Texas basins project investigation in the shortest practicable time. I understand from previous testimony that the Bureau's program, as originally submitted by the Secretary of the Interior, called for appropriation of $658,000 for this investigation for fiscal year 1961 and that this amount was reduced to $458,000 in the President's budget. If not remedied, this $200,000 cut will have serious consequences, far out of proportion to the amount of money involved. A substantial reduction in the staff engaged in the investigation will be necessary. This will impair the Bureau's contribution to the program of the U.S. Study Commission and will seriously delay accomplishment of a number of key actions required for completion of the Texas basins project investigation on schedule. The work originally scheduled for fiscal years 1962 and 1963 will be seriously disrupted by these delays and because the additional personnel needed to accomplish that work could not be obtained in time. The overall result of the $200,000 reduction will be to delay for at least 1 year, and probably for a much longer period, completion of the Bureau's report. Finally, the reduction will not really be a saving and may actually increase the total cost of completing the investigation.

Under these circumstances, my association strongly urges that you restore the $200,000 reduction and approve an appropriation of $658,000 for the Texas basins project investigation for fiscal year 1961, so that the Bureau will be able to complete its report as scheduled in fiscal year 1963.

On behalf of my association, I also urge that you approve the full amounts that have been budgeted for investigations in the Texas portion of the Red River Basin. These funds consist of $12,100 for the Goodland project, $50,300 for the Prairie Dog Town and Salt Forks of Red River project, and $6,700 for the Liberty Bottoms project. The Goodland project involves irrigation of about 15,000 acres in Texas and Oklahoma along the Red River below Denison Dam, with a reconnaissance report scheduled for completion in fiscal year 1961. The Liberty Bottoms project involves another area of about 12,000 acres along the Red River in Texas below Denison Dam, with a feasibility report scheduled for completion in fiscal year 1961. The investigation of the Prairie Dog Town and Salt Forks of Red River project is a reconnaissance study initiated in fiscal year 1960 to evaluate potentialities for developing new surface water supplies in the Texas portions of the drainage areas of these streams. The reconnaissance report is scheduled for completion in fiscal year 1962.

On behalf of my association, I also urge that the committee approve the funds budgeted for construction of Bureau projects in Texas, consisting of $11

million for the San Angelo project, $2,500,000 for the Mercedes division, lower Rio Grande rehabilitation project, and $500,000 for the La Feria division, lower Rio Grande rehabilitation project. These projects all have the full and enthusiastic support of the local interests involved and will contribute substantially to the economy of the portions of the State which they will serve. The San Angelo project will assure the city of San Angelo of the additional water supply which it needs for future growth and will provide a high degree of protection to the city against the ever-present threat of flooding from the South Concho River. At the same time, the project will provide for development of 10,000 acres of new irrigation, the benefits of which will accrue not only to the farmers directly involved but also to the residents of San Angelo and other nearby communities. In recognition of the benefits that its residents will receive from this irrigation, the city has agreed to assist in the development of such irrigation by assuming the responsibility for repaying to the United States the portion of the project costs allocated to irrigation that exceed the irrigators' repayment ability.

The Mercedes and La Feria divisions, will provide urgently needed improvement and rehabilitation of two important irrigation districts in the fertile but water-short lower Rio Grande Valley of Texas. The dependable water supply which is available to this area from the Rio Grande, as regulated by Falcon Reservoir, is far from sufficient to meet growing municipal and industrial water requirements of the area and provide an adequate water supply for lands now under irrigation. Under these circumstances, it is essential that the available supply be used as efficiently as possible. Construction of the improvements authorized for the Mercedes and La Feria divisions will permit the Mercedes and La Feria districts to make the most efficient possible use of their portions of the available supply.

The El Paso County Water Improvement District No. 1 rehabilitation and betterment project is truly a water-conservation project in an area with an average annual rainfall of about 9 inches and where the conservation of water is a must.

This is a 5-year, $2.3 million program and involves—

1. Cleaning of 220 miles of drainage ditches and canals.
2. Replacement and repair of structures in the canal and lateral system, such as checks, bridges, flumes, and culverts.
3. Replacement and repair of concrete lining, straightening of laterals, and repair of plant equipment and buildings.

The whole program will be paid for by the water users in the district. The budget carries $575,000 for this project for fiscal year 1961 and we urge the committee's approval of this amount.

The McMillan Delta project on the Pecos River in New Mexico, including the salinity alleviation program, is most important to water users in the Pecos River Valley in Texas. The Red Bluff Reservoir, located just below the Texas-New Mexico State line, is the source of water supply for irrigation in the Pecos area and the saltcedar along the reaches of the Pecos River in New Mexico are robbing the irrigation farmers of the Pecos Valley in Texas of badly needed water. We urge sufficient funds be made available to continue the construction of the project and to provide for the continued cooperative work with the Pecos River Compact Commission in the salinity alleviation program.

Thank you, Mr. Chairman and members of the committee for the privilege of presenting this statement on behalf of the Texas Water Conservation Association.

Central Valley Project

Chairman Hayden. A statement by Representative Harlan Hagen, of California, pertaining to funds for features of the Central Valley project will be included in the record.

(The statement referred to follows:)

Statement of Harlan Hagen, Member of Congress From California

Mr. Chairman and subcommittee members, thank you for again permitting me the opportunity to appear before your distinguished subcommittee to urge appropriations for reclamation projects located in my congressional district in California.

I sincerely appreciate the cooperation which has been accorded me by this subcommittee in past years.

The purpose of my appearance is to urge favorable action by your subcommittee on the following appropriations:

Stone Corral Irrigation District	$1,045,181
Tea Pot Dome Water District distribution system	925,427
East side unit, proposed extension of the Central Valley project, continued planning	566,257

All of the above-mentioned items are recommended in the President's budget in the amount which I have specified.

I will comment first on the request for funds for the Stone Corral Irrigation District and the Tea Pot Dome Water District, both located in Tulare County. In both instances irrigation distribution systems are in the process of construction by the Bureau of Reclamation under repayment contracts.

The estimated total cost of each project is $1,888,000. The $1,045,181 for Stone Corral would leave an additional $450,000 to be funded.

The $925,427 for Tea Pot Dome would complete the appropriations for this project.

With respect to the proposed east side project, feasibility studies have been underway for several years to ascertain ways and means of developing an additional water supply for the east side of the southern San Joaquin Valley. The plans involve a proposed canal which would convey water from northern California along the east side of the valley into the water-deficient areas of Kern County and Tulare County.

I can assure you, Mr. Chairman, that there is a dire need for water in this area and that the situation worsens each year. The $566,257 which would be expended for planning surveys would be a continuation to extensive prior planning. Failure to continue such planning would nullify previous expenditures for this useful purpose.

I am grateful for your attention.

COMMITTEE RECESS

Chairman HAYDEN. The committee will stand in recess until 10 o'clock next Tuesday morning.

(Whereupon, at 11:15 a.m., Thursday, April 7, 1960, the committee adjourned, to reconvene at 10 a.m., Tuesday, April 12, 1960.)

PUBLIC WORKS APPROPRIATIONS FOR 1961

TUESDAY, APRIL 12, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Chairman Hayden and Senator Bible.

Also present: Senator Moss.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENT OF E. M. NAUGHTON, PRESIDENT, UTAH POWER & LIGHT CO.; ACCOMPANIED BY VERYL HOOVER, PACIFIC POWER & LIGHT CO.; R. T. PERSON, PRESIDENT, PUBLIC SERVICE CO. OF COLORADO; WALTER LUCKING, PUBLIC SERVICE CO. OF ARIZONA; AND D. W. REEVES, PUBLIC SERVICE CO. OF NEW MEXICO

GENERAL STATEMENT

Chairman HAYDEN. The committee will be in order.

This morning we will hear representatives of the private utilities serving the Colorado River area and representatives of the preference customers of the area to get their views on the transmission system that will be required to market the power from the upper Colorado River Basin project.

The committee has not heard from the Bureau of Reclamation on this matter. Today's hearing is scheduled in order that a number of witnesses who are in the city will not have to make a second trip to Washington.

The first witness will be Mr. E. M. Naughton, president of the Utah Power & Light Co. and spokesman for the utility companies of the area. We are pleased to hear from you, sir.

Mr. NAUGHTON. Thank you, sir.

Chairman Hayden and Senator Bible, I am E. M. Naughton, president of Utah Power & Light Co. With me are representatives of the major private electric utilities operating in the five upper Colorado River Basin States: Mr. Walter T. Lucking, president of Arizona Public Service Co., whom you know, from your State; D. W. Reeves, president of Public Service Co. of New Mexico; Robert T.

Person, president, Public Service Co. of Colorado; and Veryl Hoover, general manager of the Wyoming division, Pacific Power & Light Co.

PREPARED STATEMENTS

Each of us has filed a statement which we respectfully request be made a part of the record.

Chairman HAYDEN. Those statements will be included in the record, and I think the maps attached to your statement should also be printed in the record. The other maps and photographs will be placed in the committee files for the information of the committee.

(The statements referred to follow:)

STATEMENT OF E. M. NAUGHTON, PRESIDENT AND GENERAL MANAGER, UTAH POWER & LIGHT CO.

Mr. Chairman and members of the committee, I am E. M. Naughton, president and general manager of Utah Power & Light Co. With me are representatives of the other major electric companies in the area: Walter T. Lucking, president, Arizona Public Service Co.; D. W. Reeves, president and general manager, Public Service Co. of New Mexico; Robert T. Person, president, Public Service Co. of Colorado; and Veryl Hoover, general manager, Wyoming division, Pacific Power & Light Co. Each of us has filed a written statement which we request be made part of the record. However, in the interest of saving time of this busy committee, I have been designated to present a summary of all of our statements.

We urge the authorization of funds requested to carry on construction of the Colorado River storage project; however, we respectfully request that authorization of funds by this committee for the transmission division specify categorically that no money shall be spent for survey, for purchase of right-of-way, or to commence construction of any transmission facilities which will duplicate existing facilities or facilities that the private companies are going to construct.

The Colorado River storage project, under the direction of the U.S. Bureau of Reclamation, has as its prime responsibility the making available of allocated portions of Colorado River water to the upper basin States. Recognizing the need for additional water required for growth in the area, the group of private utility companies represented here today, with responsibility for electric service in the five-State area of the project, have appeared before this and other congressional committees on previous occasions with reference to the project. In 1954 and again in 1955, we urged the authorization of the storage project, offered to make our transmission facilities available, and to construct additional transmission facilities to market Colorado River storage project power. We also offered to wheel project power to preference customers.

After these hearings the Department of the Interior advised the House Interior and Insular Affairs Committee that it was sympathetic to the private companies' program and indicated that the companies' proposal would be given studied consideration if the Colorado River storage project were authorized. The Interior and Insular Affairs Committee said that it expected the proposal of the private power companies to be carefully considered by the Department of the Interior.

Appearances were made before Appropriations Committee last year by the same private companies represented here today, in connection with the Bureau of Reclamation's request for funds for transmission-line planning. We reiterated our willingness to use existing facilities, including additions thereto, for marketing project power, and to wheel to preference customers.

As a result of statements presented by the private companies at these hearings and the feasibility of the suggestions made, your committee report directed the Bureau of Reclamation to confer with the private utilities and other interested parties in planning the transmission system for marketing project power.

I am pleased to report that we have had satisfactory meetings with the Bureau of Reclamation and progress has been made. We commend your action of last year in instructing the Bureau to meet with the utilities before proceeding to spend the appropriations and believe such procedure still sound.

Let me report to you our progress to date. Pursuant to your instructions, the Bureau of Reclamation on July 10, 1959, in Salt Lake City, presented to the utilities and to the preference customers a map showing the Bureau's proposed transmission system consisting of single circuit 345,000-volt transmission lines to load centers. The Bureau requested that after the utilities had considered the plan they again meet with the Bureau.

On October 1, 1959, the utilities of the five upper basin States, having considered the Bureau's plan in detail, met with the Bureau and outlined the utilities' plans for a transmission network which the utilities are going to build. A booklet containing these plans entitled "Electric Utility Transmission System Study as Related to the Colorado River Storage Project," dated October 1, 1959, has been given to the committee.

The utilities presented the same plans to the preference customers on October 13, 1959, at a meeting in Salt Lake City sponsored by the Bureau of Reclamation.

Construction of the facilities contemplated by these plans is in consonance with the utilities' transmission requirements for the next 20 years to serve 20 million kilowatts of load in the five-State area, including the 1.2 million kilowatts of load to be supplied by the upper Colorado River project plants.

The private utility companies are responsible for better than three-fourths of the area's load. Our transmission plans permit integration of project powerplants with other Federal plants in the upper and lower basin through our systems. This transmission network will be fully capable of marketing project power and will be available for wheeling power to preference customers. Wheeling and cooperation in building transmission lines is not new to us and is working well in each of our areas.

The construction program outlined by our companies is the culmination of some 4 years of intensive coordinated planning and work of engineers from all of the private utilities concerned. The program encompasses construction of some 2,000 miles of high voltage transmission lines and related substation facilities estimated to cost $90 million. By taking advantage of these lines, as well as companies' existing lines, the Bureau would be required to spend only $42 million instead of $157 million included in the Bureau's project cost estimate. Also, further savings are made possible through orderly construction of facilities as the need arises through load growth and future generating station location.

The total load of the five States—Arizona, Colorado, New Mexico, Utah, and Wyoming—is expected to increase by some 16 million kilowatts by 1980. This increase is approximately 15 times the total capacity of the authorized Colorado River storage plants. Any long-range transmission plan must be designed to meet total area requirements, not just to transmit project power to preference customers. Furthermore, the indicated requirements of preference customers in the upper basin of Colorado River are for many years substantially less than the project's potential power generation. It is quite obvious, therefore, that realization of maximum power revenues will require that the private utilities absorb substantial project generation through 1980.

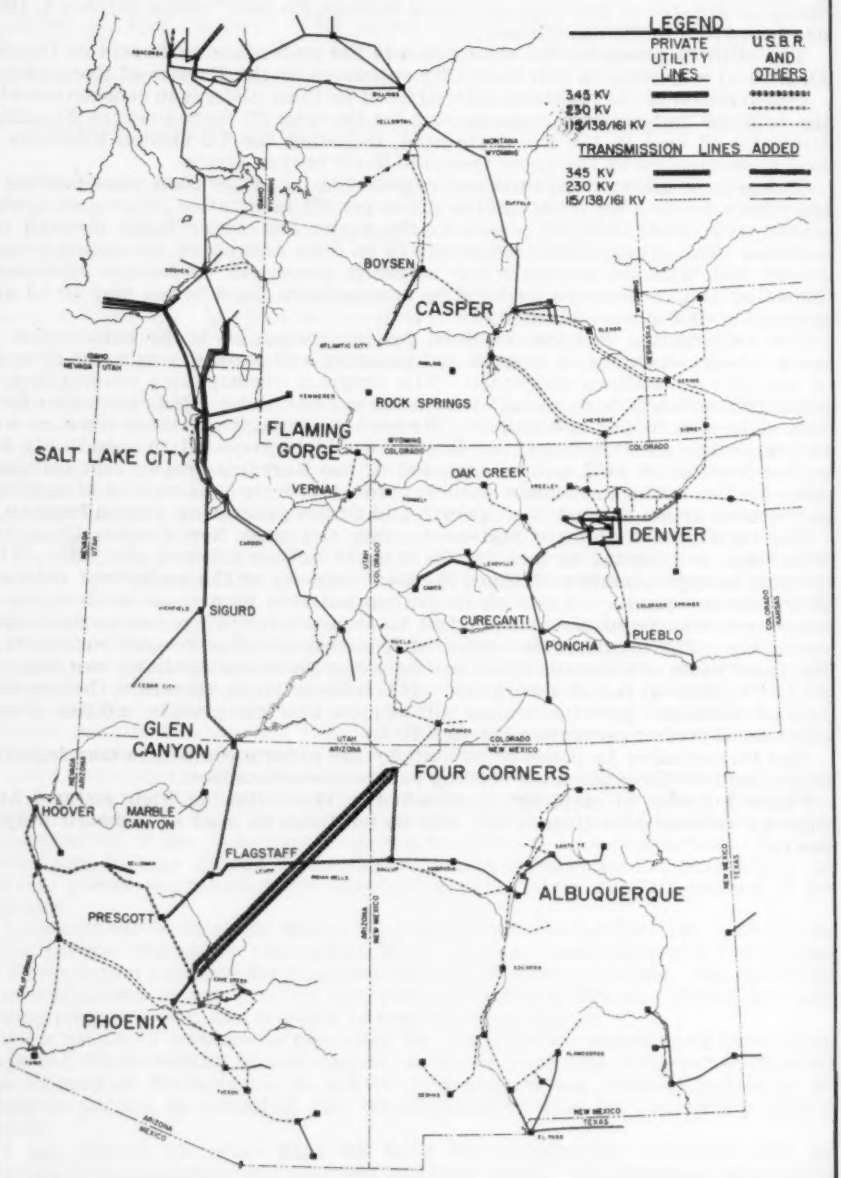
The transmission facilities to be built by the private companies may logically be divided into three phases, according to time of construction.

Phase 1 (refer to map, fig. 1, attached): The following high voltage, high capacity transmission lines which will be built can be used to transmit project power.

FIGURE 1

PRIVATE UTILITIES TRANSMISSION PLAN FOR MARKETING COLORADO RIVER STORAGE PROJECT POWER

PHASE 1



Utah Power & Light Co. and Arizona Public Service Co. will have in service not later than 1964 410 miles of 230,000-volt line from Salt Lake City, Utah, to Flagstaff, Ariz., which will integrate the systems of the two companies. Seventy miles of this line between Nephi and Sigurd, Utah, are completed. A photograph of a portion of this line is attached.

Utah Power & Light Co. also has under construction for service by November 1960, 100 miles of 138,000-volt line between its Carbon steam-electric plant and Vernal, Utah, which can be extended 25 miles to Flaming Gorge plant or connected to an existing REA line, extending from Vernal to Flaming Gorge to integrate the Flaming Gorge and Glen Canyon plants.

Utah Power & Light Co. and California-Pacific Utilities Co. will have in service this year 110 miles of 138,000-volt line between Sigurd and Ceder City, Utah.

Arizona Public Service Co. will have in service in 1963 two 345,000-volt lines each 292 miles long between its Four Corners steam-electric development in northwestern New Mexico and the Phoenix area, and 251 miles of 230,000-volt line from Four Corners to Flagstaff via Gallup, N. Mex.

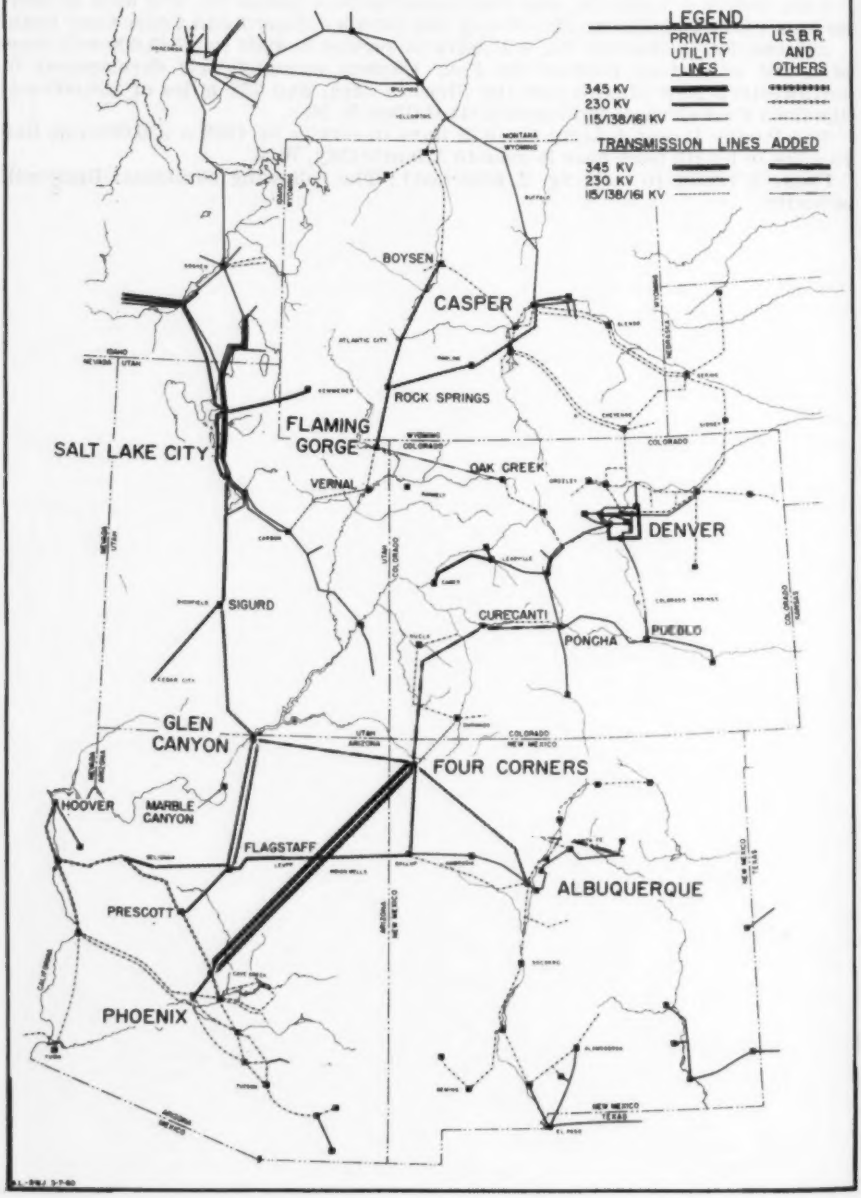
The Pacific Power & Light Co. will have in service by 1963 a 230,000-volt line 70 miles in length from near Boysen to Atlantic City, Wyo.

Phase 2 (refer to map, fig. 2, attached): The following additional lines will be built:

FIGURE 2

PRIVATE UTILITIES TRANSMISSION PLAN FOR MARKETING COLORADO RIVER STORAGE PROJECT POWER

PHASE 2



The Arizona Public Service Co. will have by 1964 an additional 230,000-volt line, 130 miles in length, from near Glen Canyon to Flagstaff, and 60 miles from Flagstaff to Seligman.

Pacific Power & Light Co. will have in service in Wyoming by 1965, 160 miles of 230,000-volt line from Casper to Rawlins to Rock Springs and 55 miles from Atlantic City to Rock Springs. The next step may be a connection to the Utah Power & Light Co. system.

Southern Wyoming Utilities Co. proposes to have in service by 1964 a 230,000-volt line 55 miles long from Flaming Gorge to Rock Springs.

The Public Service Co. of New Mexico will by 1964 have a 230,000-volt line in service from the Four Corners-Farmington, N. Mex. area to Albuquerque, a distance of 180 miles.

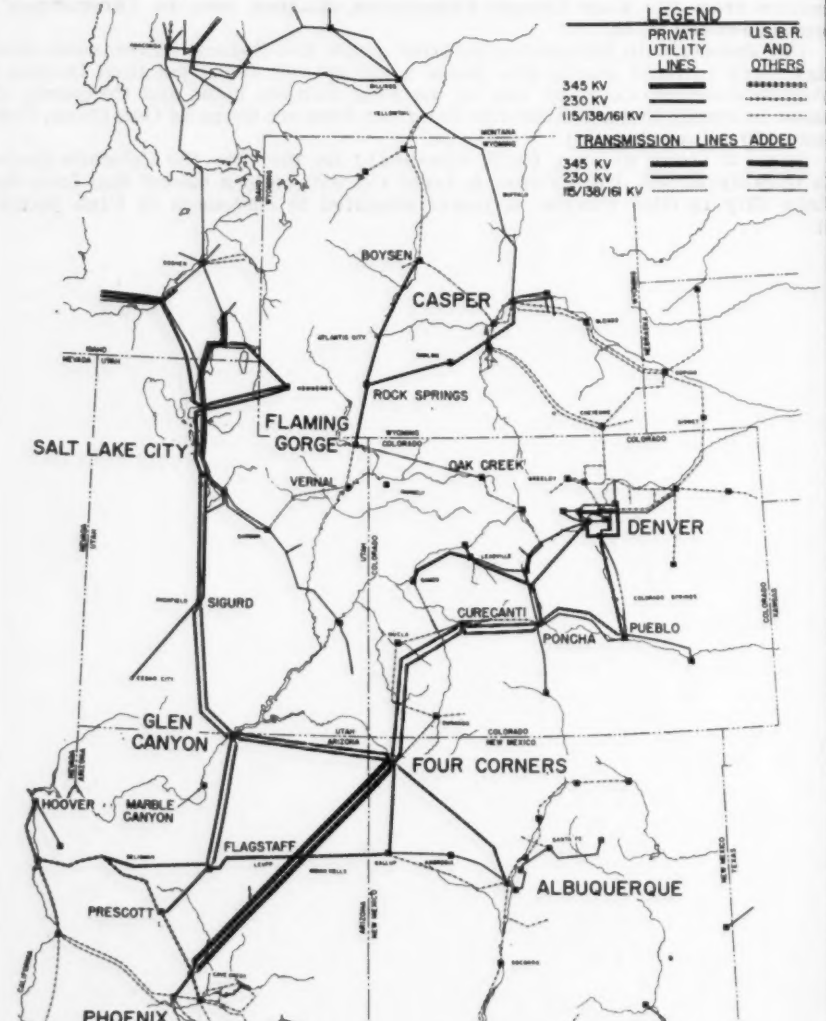
(To concert with the private utilities' plans, the Federal Government would have only to build during this phase a 230,000-volt line from Glen Canyon to Poncha Junction, Colo., by way of the Four Corners plant and Curecanti, 420 miles in length, and a 115,000-volt line from Flaming Gorge to Oak Creek, Colo., some 150 miles in length.)

Phase 3 (refer to map, fig. 3, attached): By the time the Colorado project is fully developed, Utah Power & Light Co. will build a second line from Salt Lake City to Glen Canyon, if power allocated to customers in Utah justifies it.

FIGURE 3

PRIVATE UTILITIES TRANSMISSION PLAN FOR MARKETING COLORADO RIVER STORAGE PROJECT POWER

PHASE 3



Public Service Co. of Colorado will have in service two 230,000-volt lines from Poncha Junction into the Denver area, and a 115,000-volt line from Montrose to Cameo.

(The Bureau would have only to build a second 230,000-volt line from Poncha Junction to Glen Canyon, and a 115,000-volt line from Gunnison to Montrose via Curecanti, 60 miles in length.)

The construction referred to above is summarized in tabular form in table 1 attached.

Since the October 1959 meetings, engineers of the private companies and the Bureau have been continuously studying the transmission requirements, and I believe are in rather close agreement as to the type of transmission system needed.

The Bureau is considering the private companies' offer to make available their existing and future transmission facilities to market as well as to "wheel" to preference customers Colorado River storage project power. We are fully convinced that use of the private utility companies' transmission facilities will result in a substantial financial contribution to the Colorado River storage project.

By accepting our offer, the Federal Government would save a minimum of $90 million of public funds for project transmission facilities which it would otherwise spend. The Bureau's current estimate of the project's cost of $1,055 million, about $70 million above the 1954 estimated cost. The amount of money authorized to be appropriated in the 1956 act was only $760 million—some $295 million less than current estimates of project cost. If inflation continues, the cost of the project will be greater.

With a limited amount of money available each year to be appropriated for the Colorado project, a $90 million reduction in expenditures would make better use of available funds for earlier construction of water development facilities—the project's primary objective. In this connection it should be noted, as shown below, a $90 million saving in transmission expenditures would pay for 10 of the 11 participating projects.

Water development projects

Project and location:	*Cost, million dollars*
Paonia, Colo	8.5
Pine River extension, Colo	.2
Smith Fork, Colo	4.4
Florida, Colo	7.4
Silt, Colo	3.5
Hammond, N. Mex	3.2
Emery, Utah	9.9
Seedskadee, Wyo	37.9
Lyman, Wyo	11.4
La Barge, Wyo	1.8
Subtotal	88.4
Central Utah, Utah	235.9
Total	324.3

Furthermore, the investment of $90 million by the private companies would broaden the tax base in their respective areas and would result in payment by them of an additional $4 million in taxes annually. It would result in an increase in taxes to the various levels of local Government agencies of $1.67 million, 50 percent to 60 percent of which would go for the operation of our schools which are faced with growing populations and rising costs.

Each of the utilities represented here today, by letter addressed to the Secretary of the Interior, has made a firm offer to wheel power to preference customers, stating the charge therefore. Copies of these letters are attached. In each case the rate is based upon the facilities to do the job in the specific company's area.

The Colorado River Storage Project Act, Public Law No. 485, of the 84th Congress, 2d session, passed April 11, 1956, contains the following language:

"In order to initiate the comprehensive development of the water resources of the Upper Colorado River Basin, for the purposes, among others, of regulating

the flow of the Colorado River, storing water for beneficial consumptive use, making it possible for the States of the Upper Basin to utilize, consistently with the provisions of the Colorado River Compact, the apportionments made to and among them in the Colorado River Compact and the Upper Colorado River Basin Compact, respectively, providing for the reclamation of arid and semiarid land, for the control of floods, *and for the generation of hydroelectric power, as an incident of the foregoing purposes*, the Secretary of the Interior is hereby authorized (1) to construct, operate, and maintain the following initial units of the Colorado River storage project, * * *." [Italics added for emphasis.]

The legislative history of the act in part is set forth in House Report No. 1087 prepared by the House Committee on Interior and Insular Affairs of the 84th Congress in 1955. There are one or two comments from the House report which I would like to recall to your committee. The report states:

"The legislative proposals made herein are in general accord with the established policy followed by the Congress in connection with Federal reclamation projects for the last 50 years. In some respects the provisions of this bill are more conservative than established policy. The repayment required under provisions of this bill is designed to insure *the concurrent return* to the Treasury of expenditures for power, irrigation, municipal and industrial water supply purposes. Expenditures for power and municipal and industrial water supply will be returned with interest, including interest during construction. Expenditures for irrigation will be returned without interest *in equal annual installments* within 50 years after the expiration of any authorized development period." [Italic added for emphasis.]

Later on in the report, the following language is found:

"* * * While the amount for irrigation in the bill of about $282.8 million does not bear interest, *pursuant to the 50-year-old principle of reclamation law*, this amount would be returned, under the provisions of the bill, *in equal annual installments* in 50 years plus any development period authorized. * * *" [Italic added for emphasis.]

With the foregoing provisions in mind, the four investor-owned companies, operating in the States of Utah, Colorado, New Mexico, and Arizona, wish to emphasize to this committee the necessity of marketing the power from the project hydroelectric plants on a business basis at the highest price it will bring which will produce revenues at the very earliest opportunity for repayment of funds secured from the Federal Treasury to build the participating projects authorized by the Project Act.

So far as the Upper Basin States are concerned, our primary motive in pressing for the authorization of the Colorado River Storage Project Act was to develop the water resources of the upper basin. In fact, it is only through the full development of the water from the Colorado River and its tributaries allocated to the Upper Basin States that we will be in a position to provide the impetus for and support of our future agricultural, industrial, and population growth.

It is intended that the generation of electric energy from the project plants will supply the necessary revenues to repay the loans to be made by the Federal Government for construction of the participating projects which will provide the water development. This is the job of the power revenues. It, therefore, becomes of prime importance that in pricing the power for sale the Secretary sees to it that the price set for power is high enough to provide adequate revenues toward the earliest possible development of the participating projects.

Since the non-interest-bearing irrigation features are to be repaid in annual installments, as so clearly stated in the above cited reports, every effort should be made to the end that revenues from the power source will provide the maximum possible help to meet this obligation.

We believe the Upper Colorado Commission clearly had in mind the burden which the power revenues must bear when it set out in its statement of policy pertaining to market area, basic marketing criteria and energy rates in a letter addressed to the Honorable Fred A. Seaton, Secretary of the Interior, March 7, 1960.

I quote in part from the preamble of that statement of policy:

"The Secretary of the Interior is required to operate the water-regulating power-generating facilities of the Colorado River storage project in an efficient manner and to apportion and distribute the hydroelectric energy in as equitable and fair way as practicable, at the same time maintaining a *rapid and efficient payout schedule for the storage units and participating projects.* In performing these functions, the Secretary must comply with the 'preference clause' and

other applicable portions of Reclamation Law, including Public Law 485, 84th Congress" (70 Stat. 105). [Italic added for emphasis.]

and also in full the policy on energy rates:

"The delivery of all energy generated by or credited to, the powerplants of the Colorado River storage project shall be at rates that will provide repayment assistance to retire the costs of the Colorado River storage project and participating projects allocated to irrigation in a manner consistent with an orderly and progressive development of the water and land resources of the Upper Division States in conformity with Public Law 485, 84th Congress, 2d session (70 Stat. 105)."

There are three other factors which we believe are of equal importance in emphasizing the necessity for properly pricing in the beginning the power for sale:

First, the comments of the Federal Power Commission found in Senate Document No. 79, 86th Congress, 2d session, page 71, wherein the Federal Power Commission, in discussing the record of flows of the Colorado River, states there is evidence that the flows relied on by the Bureau of Reclamation could be about 7 percent too high. The report further comments:

"Although it is reasonable to anticipate average flows during the filling of the reservoirs, studies show that operation of Glen Canyon could be critical for 20 years or more if the low flows of 1933–56 should recur coincident with filling of the reservoir."

Obviously, if such a contingency should become a reality, the estimated power revenues from the sale of project power would be materially reduced, and the ability to repay the appropriations made for the construction of the storage projects or the participating projects could be materially affected.

The second reason why the rates for sale of power should be set with due regard to the value of the power and the obligation of the power revenues to supply the revenues to repay the Federal loans for construction of the project, is the fact, as has already been stated, that the forces of inflation have increased the estimated costs of the project by approximately $70 million.

There is no evidence that the forces of inflation are about to disappear, and it seems a fair assumption that before the storage and participating projects are completed costs will be increased substantially more.

The third reason for setting an adequate rate for the sale of project power has been illustrated by the difficulty encountered recently with the Bonneville Power Administration which has been operating at a loss over the past 2 years and which expects to operate at an average loss of over $6 million a year for the next 5 years. This illustrates the fact that it has been most difficult, if not impossible, because of contracts or political pressures, to raise the rate once it has been established. No one would object to a rate reduction, but every customer is concerned about a rate increase.

As additional funds are requested to complete storage and participating projects, it is our judgment that Congress will be more inclined to grant appropriations if the project power is being sold at a price commensurate with its value to produce the maximum revenues for repayment of the funds advanced by Congress for construction purposes.

For the foregoing reasons, we respectfully request that as appropriations are made to carry forward the Colorado River storage project the use of funds so appropriated be made subject to the condition that in accordance with congressional intent all power from the Colorado River storage project shall be sold at a price, consistent with applicable law, as will produce maximum revenues, without subsidy to any group or groups, private or public, for repayment of the funds appropriated by Congress for construction of the storage and participating projects.

With the objective in mind of providing maximum revenues from power sources for repayment of loans from the Treasury, and particularly looking toward the earliest possible development of the water resources of the State of Utah, which will only be realized from the construction of central Utah and other participating projects, the Utah Power & Light Co., is willing to negotiate with the Bureau of Reclamation for the purchase of firm power at a price embracing the above concepts.

Utah Power & Light Co., by letter to the Secretary of the Interior, a copy of which is attached, has offered to wheel, for preference customers, project power to load centers. The rate quoted for such service is 1.55 mills per kilowatt-hour

based on delivery to preference customers at an annual load factor of 57 percent and at 138,000 volts.

If the Federal Government elects to integrate the Glen Canyon and Flaming Gorge plants and transmit power to preference customers in Utah, it would have to build over 400 miles of high voltage transmission lines which would duplicate transmission lines of Utah Power & Light Co.

In closing, I would like to repeat the request that I made in the beginning that the authorization of funds by this committee for transmission specify that no money shall be spent for survey, for the purchase of right-of-way, or to commence construction of any transmission facility which will duplicate existing facilities or facilities to be constructed by the private companies.

For myself and the Presidents of the other four companies present, I wish to thank you, Mr. Chairman, and the members of your committee, for the opportunity of appearing before you and the privilege of presenting our views to you on this subject.

Schedule of line construction by private electric companies

Line section	In service date	Ownership	Voltage	Miles
PHASE 1				
			Kilovolts	
Salt Lake to Glen Canyon (1st circuit)	1964	U.P. & L	230	280
(Nephi to Sigurd section)	1960	U.P. & L	230	70
Sigurd to Cedar City	1960	U.P. & L. and Cal. Pac.	138	110
Carbon to Vernal	1960	U.P. & L	138	100
Glen Canyon to Flagstaff (1st circuit)	1964	A.P.S	230	130
Four Corners to Phoenix (2 circuits)	1963	A.P.S	345	292
Four Corners to Flagstaff via Gallup	1963	A.P.S	230	251
Four Corners to Durango	1963	T.W.C.P	138	50
Boysen to Atlantic City	1963	P.P. & L	230	70
PHASE 2				
Glen Canyon to Flagstaff (2d circuit)	1964	A.P.S	230	130
Flagstaff to Seligman	1964	A.P.S	230	60
Four Corners to Albuquerque	1964	P.S.N.M	230	180
Atlantic City to Rock Springs	1965	P.P. & L	230	55
Rock Springs to Flaming Gorge	1964	S.W.U	230	55
Casper to Rock Springs	1965	P.P. & L	230	160
Flaming Gorge to Oak Creek	----------	USBR	115	150
Glen Canyon to Poncha Junction (via Four Corners and Curecanti).	----------	USBR	230	420
PHASE 3				
Salt Lake to Glen Canyon	----------	U.P. & L	230	280
Glen Canyon to Poncha Junction (via Four Corners and Curecanti).	----------	USBR	230	420
Curecanti to Gunnison	----------	USBR	115	30
Curecanti to Montrose	----------	USBR	115	30
Montrose to Cameo	----------	P.S.C	115	65
Poncha Junction to Denver loop lines	----------	P.S.C	230	320

ARIZONA PUBLIC SERVICE CO.,
Phoenix, Ariz., April 8, 1960.

Subject: Upper Colorado River storage project transmission facilities and power marketing.

HON. FRED A. SEATON,
Secretary of the Interior,
Washington, D.C.

SIR: My company in concert with other utility companies in the area of the Colorado River storage project, have in the past expressed our desire to cooperate with the Government for transmission and marketing of the project's power, including wheeling, by using existing transmission lines of the utilities and their planned additions. Our willingness has been expressed to Congress during hearings on appropriations and our plan presented to the USBR on October 1, 1959, entitled "Electric Utility Transmission Study as Related to Colorado River Storage Project."

This plan with which your Bureau staff is familiar, briefly stated, will interconnect and integrate the power systems of the upper and lower basin with the project plants and other Federal plants to transmit, market, and wheel power for the project, preference customers and the companies. Similar interconnections and wheeling have been in existence in Arizona for almost 20 years. This plan will also provide a flexible system which will produce maximum economical use and operation.

The following quotation for wheeling is based on the schedule of deliveries furnished by the USBR for the January 1960 calculating board studies made in Phoenix jointly by the USBR, the preference customers and a group of private utilities, considering that power will be delivered with a 60 percent annual load factor. It is also based on energy as delivered by transmission to the Phoenix area, plus energy delivered by displacement in the Four Corners area.

(*a*) Per kilowatt-hour for all energy delivered, 1.25 mills.

(*b*) We are willing to enter into an agreement under which credit will be given for the future use of transmission lines rendered idle by the declining scheduled deliveries to Arizona. This credit may be established on the basis of the future use for Marble Canyon (not presently authorized) or for future additions to our Four Corners steamplant. Considering those credits the estimated wheeling charge is 1 mill per kilowatt-hour.

(*c*) The above quotations include deliveries to Phoenix under the aforesaid schedule. The facilities to be installed would allow for deliveries to Hoover Dam with no additional charge. Should such deliveries be scheduled in definite amounts so that a transmission line between Flagstaff and Phoenix can be avoided, the wheeling quotation can be considerably reduced.

(*d*) Should deliveries at other definite points be required we will be willing to quote when delivery points and quantities are known.

The above quotation is made with the belief that project power would be withdrawn at some time in the future for upper basin preference customer use. In the event our assumptions are too much at variance with a later determination we will be most happy to examine such determination of energy and quote accordingly.

This proposal is, of course, contingent upon obtaining the necessary approval of regulatory authorities having jurisdiction, and acceptable contract form.

I appreciate the opportunity of submitting this offer and I am looking forward to being able to work out the necessary details and be of service to all interested parties.

Very truly yours,

WALTER T. LUCKING.

PUBLIC SERVICE CO. OF COLORADO,
Denver, Colo., April 6, 1960.

Hon. FRED A. SEATON,
Secretary of the Interior,
Washington, D.C.

DEAR SECRETARY SEATON: When legislation authorizing the Colorado River storage project was before the Congress for its consideration in 1954 and 1955, our company, with nine other privately owned electric utility systems operating in the Colorado River Basin area, presented certain proposals for cooperation with the Federal Government relative to the disposition and marketing of electric energy to be generated in connection with the project. We proposed that use be made of the existing company transmission systems to the extent possible to market project power and, in addition, we offered to construct such new transmission lines as may be required for this same purpose. Further, we offered to enter into contracts with the Federal Government to deliver project power to preference customers and, lastly, to purchase the power output of the project plants not contracted for by preference customers.

Pursuant to these proposals, a comprehensive plan was presented to the Bureau of Reclamation in October 1959, in a report titled "Electric Utility Transmission System Study as Related to Colorado River Storage Project." The transmission network outlined in this plan would serve to: (1) Interconnect the power systems of the upper and lower basin area, and integrate the operation of project plants with other Federal plants and utility systems in the area: (2) transmit utility company power requirements; (3) market project power; and

(4) wheel project power to preference customers—all of these accomplishments with a substantial saving in capital and operating cost.

In a letter to the utilities dated January 19, 1960, acknowledging receipt of the transmission plan, Mr. E. O. Larson, Director of Reclamation, region 4, reiterated the long-standing policy of the Department which has been to construct the backbone transmission lines while utilizing the lines of others for marketing. Certain principles were set forth whereby utility participation in project power marketing would be given consideration and on February 25, 1960, the presidents and executive representatives of the utility companies met with Mr. Larson to discuss the full application, meaning, and understanding of these principles.

With the benefit of these discussions, we are now prepared to make further proposals relating to marketing of project power within the framework of the transmission plan outlined in our proposal calling for Federal backbone 230 kilovolt transmission from Glen Canyon to interconnect with the Public Service Co. of Colorado system at Poncha. We propose to wheel project power and energy delivered to the company at the various points of interconnection between the Bureau's system and the company's system to preference customers over the present and proposed company transmission system in Colorado, under a wheeling contract similar to the one which we now have with the Colorado-Big Thompson project. The exact terms as to extent of zones, charges, etc., can be more exactly determined when power allocations and market areas are made known to us. In any event, as we view it at this time, the provisions under any new contract will be no less favorable to preference customers than those incorporated in our present agreements, and could be more favorable depending upon final resolution of the factors named above.

As I am sure you are aware, our company is not dependent on the Federal Government for its power supply and it will not be necessary for us to rely on the Colorado River storage project to meet our future requirements. We recognize, however, that net requirements of Colorado preference customers for power may be substantially less than a possible division of project power capacity for many years, also less than the capability of the Glen-Poncha transmission system, and further, that maximum revenues must be realized from project power in order to provide repayment to retire costs of the participating projects allocated to irrigation. With this in mind, we would like to reiterate our willingness to purchase project power and energy not contracted for by preference customers.

We will welcome the opportunity to discuss details of the foregoing proposals at the convenience of interested members of your organization.

Yours very truly,

R. T. PERSON, *President.*

PUBLIC SERVICE CO. OF NEW MEXICO,
Albuquerque, N. Mex., April 4, 1960.

The Honorable Secretary of the Interior FRED J. SEATON,
Department of the Interior, Washington, D.C.

MY DEAR MR. SECRETARY: The investor-owned utilities in the area of the Colorado River storage project have many times expressed their desire to cooperate with the Federal Government in the transmission and marketing of electric power from the Colorado River storage project. These utilities have urged that use be made of their existing systems and planned additions thereto to market the project power. The companies have further assured committees of the Congress and the Bureau of Reclamation of their willingness to "wheel" power to the preference customers.

In October 1959 these utilities met with the Bureau of Reclamation and outlined their plans for a transmission network which would be required by the utilities to serve their areas and which would also be capable of marketing project power in accordance with the authorizing act of 1956. This plan is outlined in a report prepared by these five companies titled "Electric Utility Transmission System Study as Related to Colorado River Storage Project," dated October 1, 1959, and attached hereto. Among the features presented in this report are the facts that the transmission facilities proposed therein would (1) interconnect the power systems of the upper and lower basin areas and integrate the operation of the project plants with other Federal plants and systems in the area; (2) transmit utility company power requirements; (3)

market project power; and (4) wheel project power to preference customers. Adoption of the utilities' proposal would permit a substantial saving in capital and operating costs to the Government.

Since the above-mentioned report provides for Government-owned transmission lines between Glen Canyon and Curecanti passing through the northwest corner of the State of New Mexico, the proposal of Public Service Co. of New Mexico is for wheeling power and energy from the vicinity of Farmington, N. Mex., to the vicinity of Albuquerque, N. Mex., over a 230-kilovolt transmission line which this company will construct.

Public Service Co. of New Mexico proposes to wheel or transmit electric energy from the vicinity of Farmington, N. Mex., to an existing 115-kilovolt point of interconnection near Albuquerque, N. Mex., for the preference customers. The electric energy will be transmitted over the 230-kilovolt transmission line and stepped down to 115 kilovolts near Albuquerque. The charges for wheeling or transmission by Public Service Co. of New Mexico will be 1.2 mills per kilowatt-hour received by Public Service Co. near Farmington. The quantity of electric energy delivered at Albuquerque will be the same as received for wheeling at Farmington, less losses.

If it is desired, Public Service Co. of New Mexico will provide firming capacity at the Albuquerque delivery point for power wheeled at a rate of 50 cents per kilowatt per month of maximum 15-minute demand created during the 12-month period ending with the current month. The demand will be that measured at the point of delivery in the vicinity of Albuquerque. If firming capacity is supplied, the energy delivered when such capacity is used will be returned in kind or paid for at an agreed rate based upon the costs incident to the service furnished.

It is anticipated that power from the project will not be available prior to mid-1964. Prior to that time, we will have the necessary facilities completed.

This proposal is, of course, contingent upon securing the necessary approval of regulatory authorities having jurisdiction and upon incorporation of the proposal into an acceptable form of contract.

This company appreciates the opportunity of submitting this offer and will look forward to working out the necessary details with the interested parties.

Very truly yours,

D. W. REEVES, *President.*

PACIFIC POWER & LIGHT CO.,
Casper, Wyo., April 11, 1960.

Hon. FRED A. SEATON,
Secretary of the Interior,
Interior Building, Washington, D.C.

DEAR MR. SEATON: Pacific Power & Light Co., in cooperation with Arizona Public Service Co., Public Service Co. of New Mexico, Public Service Co. of Colorado, and Utah Power & Light Co. has been studying together with the Bureau of Reclamation, the transmission requirements for bringing Colorado River storage project power to market. This study has been undertaken with a view to providing the most economical transmission system and to avoid duplications by the Government of transmission lines which are being constructed or planned for construction by the private utilities.

For over four decades, Pacific Power & Light Co., and its predecessor, Mountain States Power Co., has cooperated with the Bureau of Reclamation to assist in providing a market for Bureau power including wheeling. This cooperation has been of mutual benefit and has assisted materially in the development of the State of Wyoming.

To continue this cooperation, we are presently engaged in negotiating a new contract with representatives of the Bureau of Reclamation to replace existing contracts which expire in 1960.

It is anticipated that the present rates for wheeling will continue at 1 mill per kilowatt-hour and allowance of 7 percent for losses.

This letter is to affirm on the part of the Pacific Power & Light Co. its intention to continue to cooperate fully with the Bureau of Reclamation to provide a market for, and to wheel power from, Federal plants as it has in the past.

Yours very truly,

V. HOOVER,
General Manager, Wyoming Division.

UTAH POWER & LIGHT CO.,
Salt Lake City, Utah, April 8, 1960.

Hon. FRED A. SEATON,
Secretary of the Interior,
Washington, D.C.

DEAR SECRETARY SEATON: The five major utility companies operating in the Upper Colorado River Basin met with the officials of region 4 of the Bureau of Reclamation in Salt Lake City, Utah, on October 1, 1959, for the purpose of informing the Bureau officials of the private company plans pertinent to the transmission of Colorado River storage project power.

At that meeting, this company delivered to Mr. E. O. Larson, director of region 4, a letter outlining firm plans to construct a 230,000-volt line which would integrate the systems of the Utah Power & Light Co. and the Arizona Public Service Co. at a point on the Utah-Arizona State line near Glen Canyon.

The letter to Mr. Larson pointed out that the section of the above-referred-to line, which will be constructed and owned by Utah Power & Light Co., will—

1. Have adequate capacity and will be available to deliver power to preference customers of the Bureau in Utah.

2. Be available to market a sizable block of power through the Utah Power & Light Co.'s system.

The letter further pointed out that the Utah Power & Light Co. board of directors had directed that as additional units are installed at Glen Canyon, and to the extent that power allocations to Utah require additional facilities, Utah Co. build such facilities, as are necessary to handle the additional Utah allocations, under such terms as may then be appropriate.

The letter further contained an offer on behalf of Utah Co. to enter into discussions leading toward the development of contracts for wheeling to preference customers and the purchase of sizable blocks of power to be generated at Glen Canyon.

Utah Co. will have in service by November 1960, a 138,000-volt line from its Carbon steam-electric plant at Castle Gate, Utah, extending to the vicinity of Vernal, Utah.

The Carbon-Vernal 138,000-volt line will also be available for marketing project power and wheeling to preference customers.

The two lines described above, together with the company's existing system, will provide all of the transmission line facilities necessary to interconnect the Glen Canyon and Flaming Gorge hydroelectric plants.

In accordance with our previous commitments, Utah Power & Light Co. agrees to accept Colorado River storage project power into its system at 230,000 volts at a point near Glen Canyon and at 138,000 volts at a point near Flaming Gorge and to transmit the power so delivered, less appropriate transmission losses, to preference customers in the State of Utah, who have contracted with the Bureau for said power. Delivery to said preference customers will be at load centers in the general vicinity of Sigurd, Springville, and Vernal, Utah, at 138,000 volts.

For this wheeling service, Utah Power & Light Co. will charge 1.55 mills per kilowatt-hour based on delivery to preference customers at an annual load factor of 57 percent.

Acceptance of the foregoing wheeling proposal will materially reduce the Government investment in transmission facilities, and we are convinced will make a substantial financial contribution to the upper Colorado River storage projects and participating projects.

We are now ready and willing to enter into discussions leading toward contracts in line with the above offer, at any time mutually agreeable.

Respectfully submitted.

E. M. NAUGHTON.

STATEMENT BY V. N. HOOVER, GENERAL MANAGER, WYOMING DIVISION PACIFIC POWER & LIGHT CO.

(The map referred to is in the files of the committee)

My name is Veryl N. Hoover. I reside in Casper, Wyo., and am general manager of the Wyoming Division of Pacific Power & Light Co.

It's a pleasure to have the opportunity of appearing before you today.

With your permission I desire to outline briefly my company's plans for constructing electric transmission lines, which will help the citizens of Wyoming

in receiving their share of electric power to be generated from U.S. Bureau of Reclamation developments of the upper Colorado River storage project.

PACIFIC POWER SERVICE AREA IN WYOMING

By way of introduction, I should like to mention that Pacific Power provides electric service to more than 40,000 customers in Wyoming. Our division offices are in Casper. Other Wyoming offices are at Buffalo, Cody, Douglas, Glenrock, Greybull, Lander, Laramie, Lovell, Rawlins, Riverton, Thermopolis, and Worland.

ELECTRIC TRANSMISSION LINES IN WYOMING

Major electric transmission lines in Wyoming are shown on the attached map. Pacific's lines are shown in red and those of the Bureau of Reclamation in black.

You can see that electric lines of Pacific Power are presently interconnected with Bureau of Reclamation facilities at 21 points; namely, at the proposed Yellowtail Dam site in Montana, just north of the Wyoming border, and in Wyoming at or in the vicinities of Lovell, Powell, Cody, Garland, Basin, Worland, Thermopolis, Grass Creek, Boysen, Morton, Pavillion, Riverton, Casper (2), Glendo, Laramie, Rawlins, Bairoil, Lamont, and Wertz. Also, Pacific's electric lines are connected at seven delivery points with REA co-op facilities, and at five delivery points to Bureau facilities for irrigation pumping.

Bureau of Reclamation lines from Wyoming are interconnected in Colorado with the Public Service Co. of Colorado, and in Nebraska with the Consumers Public Power District. To the north, Pacific's new 161,000-volt line connects at Billings, Mont., with the Montana Power Co. and other facilities of the Northwest Power Pool.

Thus, you can readily see that electric lines of Pacific Power are well interconnected in Wyoming with the Bureau of Reclamation. We wheel Bureau power to "preference users" in Wyoming and the Bureau wheels power for Pacific. By working together, unnecessary duplications of electric transmission lines have been avoided in Wyoming.

It was many years ago that our predecessor company first entered into power purchase contracts with the Bureau of Reclamation and thus helped to support Wyoming irrigation developments. The amount of power available to us from the Bureau has, of course, diminished as the years have passed, and by 1956 it became necessary for the company to begin construction of a modern 100,000-kilowatt steam plant near Glenrock to meet area needs. This plant is now being doubled in size by the addition of a second unit, which will be completed late in the year.

In harmony with the record of cooperation in Wyoming, we and the Bureau are considering plans whereby Pacific will construct two 115,000-volt lines from our Glenrock plant to tie into the Bureau's transmission system nearby.

PROPOSED ELECTRIC TRANSMISSION LINES

From the map attached, to which I have already referred, you will note that Pacific Power plans to construct additional electric transmission lines in central and southern Wyoming. These plans were outlined formally in our letter of September 29, 1959, to the U.S. Department of the Interior, Bureau of Reclamation, region 4, reading as follows:

"We are now planning for and working on a 230,000-volt circuit from the vicinity of Pilot Butte through Riverton and Lander to a point near Atlantic City, Fremont County, Wyo. It is our intention to extend this 230,000-volt line from Atlantic City to the vicinity of Rock Springs before the middle of 1963.

"Initially, it is expected that these lines will be operated at 115,000 volts but will be so constructed and insulated that the voltage may be raised to 230,000 volts whenever necessary. Our intention is to build enough capacity into these lines to take care of all of the present and foreseeable requirements for electric service in this area.

"In order to thoroughly integrate the Pacific Co. system with those of the Bureau and neighboring utilities, we plan to construct at least one 230,000-volt circuit from Casper to Rawlins to Rock Springs and westward to interconnect with the systems of Utah Power & Light Co. and Idaho Power Co. It is our opinion that the construction of this line will be justified prior to the end of 1965.

"These new lines have been under consideration by the company since May 1954, and are a part of the Pacific Co.'s long-range program. They will tie together Pacific Co.'s present generation and other resources which are planned. They also take into consideration present resources of others and the future resources which we know about. It is our belief that this program will be helpful to all concerned."

The Southern Wyoming Utilities Co. at Rock Springs has proposed to construct a high-voltage transmission line, from Rock Springs south across the Wyoming border to Flaming Gorge, of sufficient capacity to transmit power which might be destined for delivery to Wyoming.

WYOMING ENTITLED TO SOME COLORADO RIVER POWER

Inasmuch as drainage water from the State of Wyoming contributes to the feasibility of the upper Colorado River storage project and byproduct electric energy, it is only right that the State should be allocated its fair share of any such power generated. It is the position of Pacific Power to assist, in any practical and economical ways, to insure the citizens of Wyoming a share of Colorado River power.

In the event immediate power requirements of Wyoming preference users are not sufficient to utilize the State's entire allocations of power, Pacific would be willing to accept delivery of any of the State's surplus allocations, when available, in order to insure that Wyoming citizens will retain the State's allocations until such times as the allocated quantities can be utilized by preference customers in the State.

WHEELING ARRANGEMENTS

Pacific Power is now wheeling Bureau power over its transmission system under contracts that are agreeable to both parties. Likewise, the Bureau is wheeling power for Pacific under the same terms.

This arrangement has proven satisfactory to all parties concerned, and we believe a similar arrangement would be equally satisfactory in bringing Colorado River power to Wyoming.

UNNECESSARY DUPLICATION OF TRANSMISSION LINES WASTEFUL

Congress specifically stated in the act authorizing the upper Colorado River storage project that electric power generation was strictly a byproduct of this vast irrigation and reclamation project, but recognized the potential contributions possible from power sales. Nevertheless, major emphasis of the project should not be placed on generating electric power, which might easily happen.

For instance, proposals have been made for the Federal Government to spend in the neighborhood of $155 million to $165 million to deliver Colorado River power only to preference users and it is doubtful, even with such a huge expenditure, that further demands will not be made for additional Federal expenditures for transmission lines.

The five electric utility companies mentioned later are already planning to construct transmission lines costing $90 million which could partially take care of distributing Colorado River power to preference users so that it would be necessary for the Federal Government to spend only approximately $42 million for essential transmission lines.

The $90 million expenditure by the investor-owned utility companies for transmission facilities is definitely programed, thus it would appear wasteful for the Federal Government to duplicate these facilities.

Furthermore, the $90 million investment being made by private utilities would result in substantial Federal and local tax revenues.

These taxes are paid as part of the normal service costs of investor-owned, taxpaying electric utilities.

Pacific Power's proposed expenditures for new high-voltage transmission lines in Wyoming, as I have outlined, represents an investment of $17 million.

POWER REQUIREMENTS OF 5-STATE AREA IN 1980

Pacific Power has worked closely with the Bureau of Reclamation and the four other electric utilities of the Rocky Mountain area adjoining the upper Colorado River storage project: Arizona Public Service Co., Public Service Co. of Colorado, Public Service Co. of New Mexico, and Utah Power & Light Co., in plan-

ning to supply future power needs of the area throughout the next 20 years and beyond.

Noncoincident peakloads of the five-State area (Arizona, Colorado, New Mexico, Utah, Wyoming) are estimated to increase from about 3,900,000 kilowatts at present to 9,200,000 kilowatts in 1970, and to 20 million kilowatts in 1980. Maximum generation of the upper Colorado River project is 1,100,000 kilowatts, or only 12 percent in 1970 and 5½ percent in 1980, of the five-State area's future power requirements.

Plans are already underway for expansions in electric power generation by the above-named companies for supplying the major requirements of the five-State area's electric power needs for the next two decades.

These are not detailed in my presentation. My only purpose in mentioning them is to point out that the total generation of all upper Colorado River project generation, when completed, represents a small portion of the overall future power requirements of the five-State area.

CONCLUSION

Since the problem of power allocation for Wyoming has not yet been fully resolved, we sincerely request your careful review and study of this matter to insure that Wyoming citizens will receive a fair and equitable allotment of power for the upper Colorado River storage project.

Also, we wish to emphasize again the importance of acting in the best interest of all of the Nation's taxpayers by avoiding wasteful expenditures for duplication of electric transmission facilities connected with the project.

You may be assured that Pacific Power will continue, as it has for the past 35 years in Wyoming, to work constructively with the Bureau of Reclamation in our electric power planning and operations, to the end that the best interests of all electric customers in the State are properly served and the development of our great State's natural resources insured.

STATEMENT BY D. W. REEVES, PRESIDENT, PUBLIC SERVICE CO. OF NEW MEXICO, ALBUQUERQUE, N. MEX.

My name is D. W. Reeves. I am president of the Public Service Co. of New Mexico with principal offices in Albuquerque, N. Mex. Our company provides electric utility service to principal communities in north-central New Mexico, including Albuquerque, Belen, Santa Fe, and Las Vegas, and to the Deming area in the southwestern part of New Mexico.

I appreciate the opportunity of appearing before you today and should like to outline my views of the power situation in the Rocky Mountain region, with respect to the marketing of the byproduct or incidential hydroelectric energy to be generated by units of the Upper Colorado River storage project.

Representatives of the investor-owned, taxpaying electric utilities in the area of the Colorado River storage project have appeared at numerous times before committees of Congress with reference to this project. In every instance, they have supported the project and its basic principle of reclamation and water conservation as being vital to the economy of the area. They have expressed the conviction that incidental electric power to be generated by the project should be marketed at a rate that would make a maximum contribution of power revenues to the irrigation or participating projects and thus insure the earliest possible completion of the participating projects. For the same reason, the utilities have expressed the belief that Government expenditures for transmission facilities should be kept to a minimum. This would reduce the required payout of transmission facilities by power revenues and make power revenues available at an earlier date and in larger amounts for the participating irrigation projects.

My company has participated with others in studies to determine the power requirements of the entire area for the next 20 years. These studies have involved estimates of the load in the area in 1970 and 1980 and the generating and transmission facilities which the private utilities will require to supply the customers they serve. The studies were expanded to cover the use of these facilities for the purpose of wheeling power to be generated by the Colorado River storage project. Results of these studies have been made available to the Bureau of Reclamation and to other interested bodies. We have had

conferences with the Bureau of Reclamation in which both parties were looking for solutions to this problem and attempting to determine the best manner of distribution in order that maximum funds from power revenue will be available to the participating projects at the earliest possible date.

BASIC PRINCIPLES IN DETERMINING PRICES

Certain groups have circulated propaganda which centers around the idea that the power from the Colorado River storage project should be made available at ridiculously low rates under conditions which would result in subsidy to certain small, favored power users at the expense of the participating irrigation projects. For this reason, I would like to establish some of the basic principles which should be taken into account in determining the market areas and prices for the electric power.

The intent of Congress is stated in the act. The first sentence in the act which authorized the Colorado River storage project is as follows:

"That, in order to initiate the comprehensive development of the water resources of the Upper Colorado River Basin, for the purposes, among others, of regulating the flow of the Colorado River, storing water for beneficial consumptive use, making it possible for the States of the upper basin to utilize, consistently with the provisions of the Colorado River compact, the apportionments made to and among them in the Colorado River compact and the Upper Colorado River Basin compact, respectively, providing for the reclamation of arid and semiarid land, for the control of floods, and for the generation of hydroelectric power, as an incident of the foregoing purposes * * *." [Emphasis ours.]

It is evident from the foregoing that the act established the fact that power production is incidental to reclamation and the development and conservation of the water resources. This fact seems to have been overlooked by many who appear to believe that electric power generation is the end and principal product of the project. They seem to forget that the act plainly states that the electric power is to be used to provide revenues for the participating irrigation projects. These participating projects as named in the act are clearly irrigation projects.

USE OF REVENUES

One of our Senators from New Mexico, the Honorable Clinton P. Anderson, has recognized the business facts of this phase of the project and has stated it well in his statement on the floor of the Senate on January 27, 1960, when he said:

"Overall, the cost of power should cover returns adequate to amortize the Federal investment. When the costs are calculated, the net revenues over and above operating and maintenance costs, will provide funds as aid to irrigation in the development of the participating projects in the upper Colorado area."

With these facts in mind, it becomes crystal clear that it was the intent of the Congress that the incidental power should be sold in such a manner as to avoid subsidy to any electric system, whether investor or publicly owned. This means that the rates should be such that the revenue from power sales will provide maximum repayment assistance to retire the costs of the participating projects. It follows that the investment in transmission facilities should be maintained at the lowest possible level to market the power efficiently and that privately owned existing and planned facilities, which can be used with no additional capital cost to the taxpayers, should be used to the fullest possible extent to accomplish this purpose. If this policy is followed, then the revenues from electric power will, as you and your colleagues intended, make the greatest possible contribution to the participating projects and assure their completion at the earliest possible time. On the other hand, if power is sold to any favored group at rates too low to produce repayment assistance to the reclamation projects, the intent of Congress as expressed in the act will have been negated.

CONTEMPLATED CAPACITY

It might be well to evaluate the relative importance of the electric power which will be generated by the project. The fact that the authorized project contemplates the installation of some 1,100,000 kilowatts of generating capacity tends to inflate the importance of this power in relation to the total power requirements of the area. Our utility studies have shown that a total of

9,200,000 kilowatts will be required in 1970 and nearly 20 million kilowatts will be required in 1980 to adequately serve the area. In other words, the total project power represents only about 12 percent of the generating capacity which will be required in 1970 and only 5½ percent of that which will be required by 1980.

A group of "preference" customers formed a corporation known as Colorado River Basin Consumers Power, Inc. and retained the Kuljian Corp. to prepare a report which has now been completed and circulated. This report recommends Government construction of lines estimated to cost between $155 million and $165 million to deliver power only to "preference" customers. On the other hand, the report prepared by the five Rocky Mountain utilities, i.e., Utah Power & Light Co.: Colorado Public Service Co., Arizona Public Service Co., the Wyoming division of the Pacific Power & Light Co., and the Public Service Co. of New Mexico contemplates construction of transmission lines by the Federal Government totaling approximately $41 million. These lines, in general, are the "backbone" lines between principal project features and appear to be required by the Bureau in order to meet the longstanding policy of the Department which has been to construct the backbone lines while using the lines of others for marketing. The remainder of the lines necessary to distribute the power will be built by the utilities in any case and can be used to wheel power for the "preference" users. The investment by the private utilities to construct these lines would amount to an estimated $90 million.

The investor-owned utilities have pointed out that they will build essentially the same facilities to serve their customers regardless of the lines that would be built by the Government to distribute and market Colorado storage project power to the "preference" customers. The utilities have offered to make these facilities available for wheeling power to "preference" users. It is evident that the cost to the Government for wheeling under such arrangements would be less than with a duplicating Government-owned system. Facilities which Public Service Co. of New Mexico will make available for wheeling project power have already been described in a letter dated April 4, 1960, and a firm price established in an offer to the Secretary of the Interior. A copy of this offer is submitted for the record.

ECONOMIC WASTE

It should be noted that the offer of the utilities provides for firming of the entire transmission system. The lines described in the Kuljian Corp. report are an economic waste in that they duplicate many of the lines that will be built by the utilities. The lines described in the Kuljian report also do not provide for firming, and that very necessary feature may become the basis for further requests for funds in the future to provide firm service.

There is another concern which is beginning to assume increasing importance to a number of us in the West. For many years, our friends in the East and South have been sympathetic to reclamation projects. We, as westerners, appreciate this understanding and the assistance the East and South have given us in making possible many of the projects essential to the development of the West. I do not believe we can expect our friends in the East and South to continue to support the reclamation projects which are vital to our area if we ask for funds for unnecessary projects. Using the Kuljian Corp.'s estimate on this project, the taxpayers of the Nation would be asked to spend an additional $120 million unnecessarily.

All of us recognize the necessity for a strong, sound government and are aware that such a government costs money and must be paid for by the taxpayers. We believe that the following taxes would accrue to governmental agencies as a result of the expenditures by private companies—

(*a*) To State and local taxing agencies each year: Advalorem taxes based on prevailing rates in the area on a $90 million investment of $1,670,000 to $1,800,000.

(*b*) Directly to the Federal Government (see following): Federal income tax based on a fair return of 6 percent on the $90 million investment with 50 percent of the investment obtained through issuance of 4 percent bonds, $3,900,000.

In giving consideration to the above figure for Federal income taxes on the $90 million investment proposed by the private companies, two things should be considered: First, as the facilities are depreciated over the life, estimated to be some 40 years, the base upon which the fair return is calculated will be decreased and thus decrease the annual income taxes. Second, a part of the initial annual

tax bill may be deferred to later years by use of accelerated depreciation. However, over a 40-year period allowing for both considerations and assuming that the utilities are actually able to maintain a fair return of 6 percent on the investment, $78 million in direct taxes will accrue to the Federal Government. This $78 million in added revenues to the Federal Government resulting from the private utilities' investment would, if appropriated by the Congress, certainly pay for a lot of irrigation.

(c) Taxes accruing indirectly to the Federal Government annually as a result of private investments: Federal income tax from individuals receiving income from common stock based on 6 percent on the $90 million investment ($5,400,000, less $1,800,000 for interest, $3,600,000) and assuming 70 percent of this earning paid as dividends, to individuals in 26 percent tax bracket	$650,000
Federal income tax from recipients of interest on borrowed money assumed to be in 26 percent tax bracket	470,000
Total indirect taxes to Federal Government	1,120,000

Even though in paragraph 9 of page 3 of the Kuljian Corp. report taxes are referred to as "academic," to me they are very real and represent a major contribution to the maintenance of our governmental facilities. There is no reason that a select few should be exempt from paying their propo.tionate share of the taxes attached to any service.

COMPARISON OF RATES CHARGED

I would like to make this further comment: In New Mexico, and I presume in other places, the rates charged by the investor-owner, taxpaying utilities notwithstanding the tax burden, are lower than those charged by preference systems paying only token taxes or no taxes at all, and as you know, some of the preference customers are enjoying 2-percent interest on money borrowed from the Government. I would also like to point out to the committee that this power is being developed in an area that has never suffered from power shortages regardless of some of the claims and innuendoes based upon minor, temporary, isolated circumstances.

I should like to make it clear for the record that I do not subscribe to the theory of "preference." The "preference" users already have more than enough advantages and should not be given further advantages at the expense of the participating projects. The power should be sold on a business basis, at the highest prices it will bring, through bids or otherwise, in order to provide these repayments. This would not conflict with the existing "preference" clause. This clause applies to the allocation of power; not to the price. Further, the support of our Government is an obligation of every citizen. I can see no reason why certain of our citizens served by electric systems classified as "preference customers" should receive any exemption from supporting Government through taxes, nor should be "preference" classification be used to justify construction of unnecessary and duplicating transmission lines for their sole benefit. The great majority of our citizens who reside in areas served by an investor-owned taxpaying electric utility such as ours pay taxes for the support of our Government in their electric bills. Last year taxes accounted for 28 cents of every dollar paid us by our customers.

SUMMARY

To summarize, the act clearly indicates that it was the intent of Congress that incidental electric power should be sold at rates sufficient to secure the maximum amount of funds for completion of the participating irrigation projects. I believe that the officials of the Bureau of Reclamation want to do the best possible job in marketing Colorado River storage project power for the benefit of the participating projects and that they want to see that the intent and desires of Congress are carried out. It is my hope and my respectful request that this committee will see that the appropriation bill, as finally enacted, contains language which will be of assistance to the Bureau of Reclamation in securing maximum power revenues for the participating projects. I believe that this language should direct the Bureau of Reclamation to market the incidental Colorado River storage project power at rates and in a manner that will produce maximum revenue for the completion of the participating projects at the earliest possible date.

Of equal importance, I believe that the Bureau of Reclamation should be directed to minimize the investment in transmission facilities to the greatest possible extent by utilizing existing and planned transmisson facilities. I believe these provisions would be very helpful to the Bureau of Reclamation in carrying out its responsibilities.

Again, let me express my appreciation for this opportunity to give the committee my views.

STATEMENT OF WALTER T. LUCKING, PRESIDENT, ARIZONA PUBLIC SERVICE CO.

My name is Walter T. Lucking. I am president of Arizona Public Service Co., which provides electric utility service in 11 of the 14 counties in the State of Arizona, and which has its headquarters in Phoenix, Ariz.

I am appearing before you to tell you about my company's offer to wheel Glen Canyon power for the Bureau of Reclamation. This offer will—

Require us to build $35 to $40 million of transmission lines;

Give the Bureau a reasonable cost of transmitting power to preference customer and others;

Avoid a greater expenditure by the Government;

Make maximum use of already installed facilties; and

Fit into the needs of the area when generation additions beyond Glen Canyon are required.

I previously appeared before your committee to endorse the Upper Colorado River storage project, to stress the need for economic operation of the river's water and power resources, and to foster sound growth and development of the entire region, including Arizona.

Arizona is in both the upper and lower basins of the Colorado River, and receives some power from the lower basin Hoover-Parker-Davis projects. It has been inferred that all the project power ultimately will be sold to the preference customers in the upper basin States.

We continue to endorse the Upper Colorado River project and on July 10, after the last appearance before your committee, we were asked by the Bureau of Reclamation to meet along with other utility representatives in Salt Lake City. At this meeting there was presented to the utilities and the preference customers a map showing the Bureau's proposed transmission system. We were then requested to consider the Bureau's plan.

After studying the Bureau's plan we and the other utility companies here represented, presented on October 1, 1959, a comprehensive plan including Arizona's portion of the transmission network which we propose to build. This transmission plan fits into the long-range plan of our company for the next 20 years. Our plan was made available to the preference customers and interested parties in the State of Arizona as well as others outside of the State. The long-range plan of Arizona Public Service Co. and Utah Power & Light Co. includes building a transmission line interconnecting the two companies at a point on the border of the two adjoining States and very near the Glen Canyon power project. These lines will be available for integration and operation of the Glen Canyon powerplants with the utility-owned systems as well as the Federal powerplants at other locations in the Colorado River Basin.

This plan was offered to the Bureau, and we have met several times outlining the comprehensive transmission network which the utilities would build to do a complete job; i.e., transmitting the private utility companies' power to the marketing areas, and wheeling the Upper Colorado River project power to the marketing areas to meet the requirements of the preference users.

A comparison of the utilities' plan with the Bureau's plan clearly shows that, with the utilities' plan, less money would be spent by the Federal Government for project transmission requirements. The moneys to be invested by the private utilities would improve the tax structure of the several States, including Arizona, and particularly the school districts, because invariably the utility companies are the largest single taxpayers in these districts. Tax-free facilities tend to disrupt area tax structures and penalize the school districts.

I want to go on record again today as expressing our willingness to go forward and build the proposed transmission lines, making them available to the Government for the movement of the project's power to the marketing areas, integrating with the utility companies and other neighboring Federal projects, thus producing flexibility for maximum economical use and operation. I am sure terms and conditions of such an arrangement can be worked out to the

mutual satisfaction of the Government as well as my company, and the preference users.

In a letter to the Secretary of the Interior my company proposes to wheel the energy to be delivered at market areas in the State of Arizona for preference users. The letter to the Secretary is attached.

I wish to say that there has been good cooperation in meetings with the Bureau representatives. I hope we can continue to work in this same climate for the benefit of all. I sincerely believe this can be accomplished by taking the Upper Colorado River project power to market over facilities provided by the utility companies. By reducing the Federal Government's transmission line expenditures, these funds can be used for earlier development of related irrigation projects in the Colorado River Basin.

The statements made by Mr. Naughton in behalf of all our companies are entirely in accord with my thinking, and I urge that consideration be given to the merits of our plan, its soundness, worthwhile economies and mutual benefits.

Thank you for giving me the opportunity to appear before your committee.

STATEMENT BY ROBERT T. PERSON, PRESIDENT, PUBLIC SERVICE CO. OF COLORADO

Mr. Chairman, members of the committee, my name is Robert T. Person and I am president of Public Service Co. of Colorado. My business address is 900 15th Street, Denver, Colo.

My appearance at this time is primarily to report to this committee progress made to date on cooperative studies between our company and the Bureau of Reclamation with respect to plans for a transmission system to market electric energy to be produced by the Colorado River storage project. In addition, I would also like to comment briefly on the appropriations request of the Bureau for the Transmission Divsion of this project currently under consideration by this committee for fiscal year 1961.

As this committee will recall, last year when it became apparent that the Bureau of Reclamation was proceeding with the planning of a transmission system for the project without consulting power users in the area, both the House and Senate Appropriations Committees strongly recommended and directed the Bureau thenceforth to coordinate its study and planning of the transmission system with these groups (H. Rept. No. 424, 86th Cong., 1st sess., June 2, 1959, p. 25; S. Rept. No. 486, 86th Cong., 1st sess., July 8, 1959, p. 43). The report of the House Committee on Appropriations went further and provided as follows:

"* * * none of the funds provided shall be used for additional surveys, rights-of-way acquisition, design or construction work on transmission lines until economic studies to determine proper market areas have been completed and the interested parties in the area advised of the status of planning, the tentative allocations of power, and are given the opportunity to react to proposals of the Bureau for the location and size of transmission lines."

Subsequent to the hearings last year, there have been numerous conferences and joint studies undertaken by the Bureau of Reclamation and the private utilities and preference groups in the area. Speaking for our company, we can state to this committee that there has been excellent cooperation in these matters by the Bureau, and substantial progress has been made. We are certain that the Bureau has made every effort to carry out the spirit of the direction of the Appropriations Committees last year.

SUMMARY OF JOINT STUDIES

The conferences and joint studies undertaken may be briefly recapitulated and summarized as follows:

July 10, 1959: The Bureau of Reclamation presented to the area utilities and preference customers a map showing the Bureau's tentative proposal for a transmission system. No allocations of power were made but the plan presented was based on certain tentative assumptions of power flows into the various States of the upper division.

October 1, 1959: The area utilities met with the Bureau and outlined their comprehensive plan for development of a transmission system. This plan is contained in the report entitled "Electric Utility Transmission System Study as Related to Colorado River Storage Project," October 1, 1959. This report will

be presented in more detail by another witness but reference to said report is made herewith.

October 13, 1959: At the request of the Bureau, the area utilities presented their transmission plan to the Colorado River Basin preference users and the various interested State agencies.

January–February 1960: A joint transmission study between the area utilities and the Bureau was undertaken at Phoenix, Ariz. Participating in these studies were also representatives of the various preference user groups. These studies included digital computer studies of the proposed transmission system. The purpose of these studies was to test the flexibility of the proposed system, particularly to determine if such system was flexible enough to allow flows of power into the lower basin. Although these studies have been completed, to date, the results of this study have not been published.

February 25, 1960: Meeting between representatives of the Bureau of Reclamation and the area private utilities to discuss in more detail a letter addressed by regional director, region 4, Bureau of Reclamation, to the area utilities dated January 19, 1960. This letter had acknowledged receipt of the proposed transmission plan of the area utilities and set forth certain principles which in the opinion of the Bureau should be evaluated in any further consideration of the transmission plan presented. Copy of this letter is attached herewith as appendix A.

While substantial progress has been made as a result of these various conferences and joint studies outlined above, the Department of Interior has to date made no allocations of power among the several States, nor has there been any determination made of the power market area or any announcement of any proposed interim rate schedule.

We would like to join the other interested parties and agencies appearing before the committee in this matter in urging that these determinations should be made by the Department of Interior as rapidly as possible.

COMPREHENSIVE TRANSMISSION PLAN

Referring more particularly to the comprehensive transmission plan proposed by the private companies, I would like to comment briefly on this plan, particularly as it relates to the State of Colorado, and to the proposals made by our company as they pertain to the marketing and distribution of power from the project in our State.

As this committee is already advised, it is presently anticipated that initial production of power from the storage project will be available in the year 1964 or 1965 with ultimate capacity available by 1980. Ultimate capacity of project plants is estimated to be 1,100 megawatts.

The tentative transmission plan presented by the Bureau on July 10, 1959, assumed an ultimate power flow into the State of Colorado from the project of 535 megawatts. This initial plan contemplated the construction by the Bureau of a single-circuit, 345-kilovolt line from Glen Canyon to the Four Corners area in New Mexico near Farmington, then to Curecanti and then to Pueblo; and a single-circuit, 115-kilovolt line from Flaming Gorge to Oak Creek to market storage project power in the State of Colorado.

In contrast to the initial plan of the Bureau, the comprehensive plan presented by our company as it pertains to Colorado contemplates the construction by the Bureau of the following transmission facilities:

A double-circuit, 230-kilovolt line from Glen Canyon to Poncha Junction, where the Bureau lines would interconnect with our company's presently existing transmission system;

A single-circuit, 115-kilovolt line from Flaming Gorge to Oak Creek;

A single-circuit, 115-kilovolt line from Curecanti to Gunnison and from Curecanti to Montrose.

The transmission lines to be constructed by our company under the plan outlined include the following:

140 circuit miles of 230-kilovolt line from Poncha Junction to Twin Lakes to Denver;

180 circuit miles of 230-kilovolt line from Poncha Junction to Pueblo to Denver;

65 miles of 115-kilovolt line from Cameo, near Grand Junction, to Montrose.

Under this plan it is proposed that, prior to initial operation of the project plants, the Bureau would construct the first 230-kilovolt line from Glen Canyon

to Poncha Junction and the 115-kilovolt line from Flaming Gorge to Oak Creek. All other facilities under the plan would be constructed at a later date, but it is contemplated that such facilities would be in service prior to ultimate operation of the project.

INTEGRATED TRANSMISSION SYSTEM

Construction by the company of the facilities outlined above will be in consonance with our company's long-range transmission requirements for the next 20 years, and together with the facilities to be constructed by the Bureau and other existing facilities now in service, will provide the State with a wholly integrated transmission system interconnecting the powerplants of the project with other Federal plants in the State and capable of fully marketing project power as may be required to power users in the area. Operationally, the utmost in service continuity may be assured by integrating the hydroelectric capacity of the project with the large steam generating plants which we presently operate at load centers in the power market area within the State. By the time the first power is produced by the project in 1964 or 1965, our company will have in excess of 1,200 megawatts of thermal generating capacity in operation in the area.

The estimated investment on the part of the companies in the five-State area required to build the transmission facilities proposed is approximately $90 million, leaving only $42 million to be expended by the Bureau. That portion of the facilities to be built by our company as outlined above will cost approximately $19,300,000.

Under this plan, the cost of transmission facilities chargeable to the project are not only substantially reduced, thereby reducing overall project costs, but also the investment represented in facilities constructed by the companies will result in a broadened local tax base in the areas affected inuring to the benefit and support of local governments and school programs in such areas. The facilities to be constructed by the Federal Government will not produce additional tax benefits to the local areas involved.

Reference has been made above to the letter dated January 19, 1960, from the Bureau to the area utilities and to the subsequent meeting on February 25, 1960, with respect thereto. Following this meeting and on April 6, 1960, our company has forwarded a letter to the Secretary of the Interior further implementing our proposals heretofore made in connection with this project. A copy of this letter is attached hereto as appendix B.

Within the framework of the transmission plan outlined in our proposal calling for Federal backbone 230-kilovolt transmission from Glen Canyon to interconnect with our company system at Poncha Junction, we have proposed to wheel project power and energy delivered at the various points of interconnection between the Bureau's system and the company's system to preference customers over the present and proposed company transmission system in Colorado under a wheeling contract similar to the one which we now have with the Colorado-Big Thompson project. The exact terms as to extent of zones, charges, etc., can be more exactly determined when power allocations and market areas are made known. In any event, as we view it at this time, the provisions under any new contract will be no less favorable to preference customers than those incorporated in our present agreements, and could be more favorable depending upon final resolution of the factors named above.

WILLINGNESS TO PURCHASE PROJECT POWER

Our company is not dependent on the Federal Government for its power supply and it will not be necessary for us to rely on the Colorado River storage project to meet our future power requirements. Recognizing, however, that net requirements of Colorado preference users for project power may be substantially less than a possible division of project power capacity for many years, also less than the capability of the Glen-Poncha transmission system and further that maximum revenues must be realized from project power in order to provide repayment to retire costs of the participating projects allocated to irrigation, we have reiterated our willingness to purchase project power and energy not contracted for by preference customers.

This year, the committee has before it, as we understand it, an appropriation request by the Bureau for the transmission division of the project in the amount of $518,000. We believe that at least a part of the funds currently sought may very well be used to continue studies on the plans for the transmission system of the project, provided that such studies will continue to be carried on cooperatively with prospective power users in the area and the

various State agencies involved. We do not believe, however, that any part of these funds should be used for reconnaissance surveys or rights-of-way acquisition or to commence construction of any specific transmission line or lines until proper market areas have been determined, tentative allocations of power made, and interim rate schedules published. Nor should any part of such funds be used for any such purposes without prior approval or authorization of this committee, nor in any case to construct transmission facilities which will duplicate existing facilities of the company or facilities to be constructed by the company as outlined above.

We do not understand that the Bureau for fiscal year 1961 has requested any funds to survey or commence the construction of any specific transmisison line or lines or to acquire rights-of-way for such purpose. If this committee is of the opinion that the Bureau during fiscal year 1961 should proceed with construction of any transmission facilities, then we urge and recommend that the committee specifically authorize the use of funds by the Bureau to commence construction of the first of the double-circuit 230-kilovolt lines from Glen Canyon to Poncha Junction and the single-circuit 115-kilovolt line from Flaming Gorge to Oak Creek.

I want to assure this committee again of our company's continuing intention to work cooperatively not only with the Bureau of Reclamation in this matter, but also with the preference users in our State and the various State agencies involved. Our company from the outset, has supported this project, vitally needed if full development of the water resources of the State and the Upper Colorado River Basin is to be achieved. The long-range growth and economic prosperity of our State is highly dependent upon the manner and the extent to which water resources are developed and put to beneficial and consumptive use.

BYPRODUCT HYDROELECTRIC POWER

This project has been authorized by the Congress in order to initiate the comprehensive development of the water resources of the Upper Colorado River Basin. As an incident of such purpose, byproduct hydroelectric power is to be produced under a plan whereby revenues from the sale of power will be used to repay all power costs and that portion of irrigation costs assigned for repayment by power revenues. Net revenues from the sale of power are to be credited to the Upper Colorado River Basin fund and are to be available for assistance in the construction of additional participating irrigation projects. To the extent that net power revenues may be made available from the project at an early date, such additional participating irrigation projects can be constructed which are vitally needed in the State.

We earnestly believe that the proposals made by our company in connection with this project will contribute substantially to the feasibility of the project. The reduction in transmission costs will reduce overall costs of the project and accelerate the repayment of reimbursable construction costs. If maximum economic benefits to our State, and to the water interests involved, are to be realized from the project, reimbursable construction costs must be retired at a rate commensurate with the needs of the area for rapid development and utilization of its water and land resources.

BUREAU OF RECLAMATION PRINCIPLES

Chairman HAYDEN. The letter of January 19, 1960, to Mr. Naughton from Mr. E. O. Larson, Regional Director of the Bureau of Reclamation, setting out the principles that will be used in evaluating the proposals of the utilities, will be included in the record.

(The letter referred to follows:)

DEPARTMENT OF THE INTERIOR,
BUREAU OF RECLAMATION,
REGIONAL OFFICE, REGION 4,
Salt Lake City, Utah, January 19, 1960.

Mr. E. M. NAUGHTON,
President and General Manager,
Utah Power & Light Co., Salt Lake City, Utah.

DEAR MR. NAUGHTON: Your letter of September 29 presented to us officially the preliminary plan for transmission lines proposed by the five named public

utilities. You are aware of the several meetings and discussions that have been held among interested parties subsequent to your letter of September 29 and your presentation of October 1. I am sure that you are also aware of the studies currently being made cooperatively among the public service companies, the Bureau of Reclamation, and the preference customer groups. We feel the studies now underway are particularly important and pertinent as they are aimed at determining the appropriate transmission system which should be constructed regardless of who might construct any portion thereof.

We will continue to give the proposal of the five utilities careful consideration. In doing this we will consider the proposal in the light of our usual policy and practice as well as the full context of the pertinent statements contained in congressional committee reports, such as House Document No. 1087, 84th Congress. The latter contains the following:

"Their (the utilities) proposal provides essentially that the Secretary construct the backbone transmission lines connecting major powerplants of the project and that use be made of the existing systems of the companies and additions thereto to market the power.

"The proposal is consistent with the policy expressed by the Congress for many years in appropriation acts and elsewhere whereby the Federal Government builds the basic backbone transmission system and distribution is made through existing systems where satisfactory arrangements can be worked out.

"Therefore, the committee expects the proposal by the private power companies for cooperation in the development to be carefully considered by the Department of the Interior and the electric power and energy of the project to be marketed, so far as possible, through the facilities of the electric utilities operating in the area, provided, of course, that the power preference laws are complied with and project repayment and consumer power rates are not adversely affected."

The observations of the committee parallel the longstanding policy of the Department which has been to construct the backbone transmission lines while utilizing to the extent practicable the lines of others for marketing. This approach has been followed many times to the advantage of all concerned.

While the present proposal would involve the utilities in the construction of backbone lines, and we perceive a number of technical and economic problems in this phase of the proposal, we do not believe that this fact alone should disqualify the plan from further consideration in the light of the overriding legal and policy considerations heretofore noted. These considerations require the evaluation of the proposal under the following principles:

1. Lines must be of sufficient capacity to assure delivery of available power.
2. There must be no interference with the ability of the Bureau to serve preference customers to the extent they would be served by federally constructed lines.
3. Backbone lines must provide suitable integration among Federal project power facilities at the time required to meet project objectives, and project use must at all times be the overriding consideration.
4. Charges made for delivery of power must not adversely affect project feasibility and payout, and particularly must be such as not to reduce quantity or timing of irrigation assistance.
5. If utilities construct the backbone high-voltage transmission lines, they must accept also the responsibility of providing transmission for delivery at lower voltage to load centers of preference customers to the same extent as would prevail under a federally constructed program.

The first three of the foregoing stated principles are basically technical in nature, although there is a relationship between principle 2 and principle 5. Principle 4 is necessary to satisfy project feasibility in all of its ramifications. Principle 5 has in it an element of feasibility as well as assurance of full compliance with preference customer laws. We would be glad to discuss the full application, meaning, and understanding of these principles with representatives of the utiliities and the preference customers, States, and others at an early opportunity, if you believe such discussion to be desirable.

Sincerely yours,

E. O. LARSON, *Regional Director.*

GENERAL STATEMENT

Mr. NAUGHTON. Please refer to my statement, since it will be a summary for the five companies.

The five companies have always supported the Colorado River storage projects. We are all interested in the early development of the water resources of our respective States.

We are here today to urge your committee to authorize the funds requested to carry on construction of the projects as outlined in the President's budget. However, as to those funds pertaining to the transmission division, we ask you to specify categorically that the Bureau spend no funds for survey, purchase of right-of-way or to commence construction of any transmission facilities which will duplicate existing facilities or facilities that the prvate companies are going to construct.

USE OF PRIVATE TRANSMISSION LINES

Your committee and other congressional committees have, from the beginning, indicated a desire that consideration be given to use of private company transmission lines to wheel or to market project power where companies offered cooperation. Last year you directed the Bureau to concert Bureau plant with those of the private companies.

The private companies have been working on long-range transmission plans giving consideration to project power marketing and wheeling to preference customers for over 4 years.

Since your directive of last year, we have had several satisfactory meetings with the Bureau, and I am pleased to report that progress has been accomplished. Greater detail of these meetings is contained in my written statement. The committee's approach last year in requiring close cooperation was sound and we recommend it be followed with reference to current appropriations.

The private company plans have been presented to Bureau officials of region 4, and, at the request of the Bureau, to preference customers who will be interested in project power. Our plans are in consonance with area requirements for the next 20 years to serve an estimated 20 million kilowatts of load in the five-State area, including the 1.2 million kilowatts generated by the Colorado River project plants.

Three-fourths of the area's load will be served by the private companies and their transmission plans permit integration of project powerplants with other Federal plants in the upper and lower basins. This transmission system will be fully capable of marketing project power and will be available for wheeling power to preference customers. Each of the private companies has had experience with wheeling agreements and cooperation in building transmission lines to the satisfaction of all parties concerned.

PROGRAM OF PRIVATE COMPANIES

The program presented by the private companies encompasses construction of 2,000 miles of high voltage transmission lines and related substation facilities at an estimated cost of $90 million. If the Government will utilize these private lines, the Bureau will need to spend only $42 million as against $157 million, as currently estimated, to provide project transmission facilities. Further savings can be effected through orderly construction as the facilities are needed.

It is expected that the electric load in Arizona, Colorado, New Mexico, Utah, and Wyoming, will increase some 16 million kilowatts by 1980, which is 15 times the total capacity of the authorized Colorado River storage plants. Obviously long-range transmission plans must provide for total area requirements rather than just for marketing Government power or to take care of preference customers.

In the beginning, the preference customers cannot possibly consume all power generated by project plants, and, therefore, to realize maximum power revenues the private companies must absorb considerable of the generation through 1980.

The map on the easel indicates the private company construction program by phases.

Phase 1: The lines to be built by the private companies are shown in blue. The Utah Co. and the Arizona Co. will have in service not later than 1964, 410 miles of 230,000-volt line between Salt Lake City, Utah, and Flagstaff, Ariz., to interconnect their systems. Seventy miles of this line in Utah have just been built and this photograph, which Mr. Lucking has shown, shows it to be first-class engineering.

Utah Co. is now building and will have in service by November 100 miles of 138,000-volt line between its Carbon plant and Vernal, Utah, near Flaming Gorge. This line can integrate the Flaming Gorge and Glen Canyon powerplants through Utah's system.

Utah Co. and California Pacific Utilities Co. is just finishing 110 miles of 138,000-volt line between Sigurd and Cedar City, Utah, in southwestern Utah.

By 1963, Arizona Co. will have two 345,000-volt lines, each 292 miles long, in service between its four corners steam-electric development in northwestern New Mexico and Phoenix, and also 251 miles of 230,000-volt line between four corners and Flagstaff via Gallup, N. Mex.

By 1963, Pacific Power & Light Co. will have constructed 125 miles of 230,000-volt line from Boyden to Rock Springs, Wyo.

Phase 2: These lines to be built by the private companies are shown in red.

By 1964, Arizona Co. will have an additional 230,000-volt line, 130 miles in length, from Glen Canyon to Flagstaff and 60 miles from Flagstaff to Seligman.

Pacific Power & Light Co. will have in service by 1965, 160 miles of 230,000-volt line from Caspe to Rawlins to Rock Springs.

It is contemplated that these facilities of Pacific Co. may eventually be connected to those of Utah Co.

In 1964, Southern Wyoming Utilities Co. proposes to have in service a 230,000-volt line, 55 miles long, from Flaming Gorge to Rock Springs, and Public Service Co. of New Mexico will have a line of the same voltage from Four Corners-Farmington to Albuquerque, N. Mex., a distance of 180 miles.

During this phase 2, the Government, to concert with the private company plans, would have to build only a 230,000-volt line from Glen Canyon to Poncha Junction, Colo., by way of Four Corners and Curecanti, which line would be 420 miles in length, and a 115,000-volt line from Flaming Gorge to Oak Creek, Colo., a distance of 150 miles. These Government lines are shown in dotted red.

Phase 3: These suggested Government lines are shown in green.

When the project is fully developed, Utah Co. would build a second line from Salt Lake City to Glen Canyon if power allocated to Utah customers justifies it; Public Service Co. of Colorado will have in service two 230,000-volt lines from Poncha Junction into the Denver area and a 115,000-volt line from Montrose to Cameo, Colo.

It is anticipated that the Bureau would only need a second 230,000-volt line from Poncha Junction to Glen Canyon, and a 115,000-volt line from Gunnison to Montrose, Colo., via Curecanti, some 60 miles long. These suggested Government lines are shown in dotted green.

ADEQUACY OF TRANSMISSION SYSTEM

I believe the engineers of the Bureau and the private companies have pretty well agreed that the transmission system outlined above is fully adequate to do the job.

Utilization of the private company transmission lines would save the Government a minimum of $90 million in transmission investment. The Bureau currently estimates the project to cost $1.055 billion, some $70 million over its 1954 estimate. The act permits appropriations of only $760 million. With continuing inflation, the project will probably cost substantially more than present estimates.

A saving of $90 million in transmission facilities would construct 10 of the 11 participating projects, and would be that much less Congress would have to appropriate.

The $90 million private investment adds to the tax base in the areas and would produce $4 million annually in taxes.

These taxes would aid various levels of local government in an amount of about $1.7 million anually, 50 to 60 percent of which would be available to operate our schools which are continually faced with rising costs and growing populations.

COLORADO RIVER STORAGE PROJECT ACT

The Colorado River Storage Project Act states that its primary purpose is development of water; that the generation of electric power is incident to that purpose.

Power revenues are to pay for water development. From a reading of House Report No. 1087 of the 84th Congress, which accompanied the authorizing act, it appears that the congressional committee and, I assume, Congress, in authorizing the project, contemplated that repayment of all phases of Government appropriations would be on a concurrent basis in equal annual installments. The basis for this contention is well documented in my written statement.

With these facts in mind, the private utilities in Colorado, Utah, Arizona, and New Mexico wish to emphasize to your committee the necessity for marketing project power on a business basis at the highest price it will bring to produce revenues that will bring about construction of water development projects.

All of the interests who urged authorization of the Colorado project were primarily concerned with development of water from the Colorado River and its tributaries. We will need this water to support agricultural, industrial, and population growth. This is the job of the power revenues.

POWER RATES

It is, therefore, of prime importance that the Secretary of the Interior set a price for this power high enough to provide adequate revenues toward the earliest possible development of the participating projects.

Three other factors also emphasize the importance of a proper price to assure adequate revenues to support the project:

1. The Federal Power Commission has stated that the Bureau's estimates of water available for power generation my be 7 percent too high, and, further, that if water conditions which existed between 1933–56 should recur during the Glen Canyon filling period, the situation could be critical for 20 years. Either of these factors would substantially reduce estimated power revenues.

2. The cost of the storage and participation projects will very likely be in excess of present estimates due to inflation forces.

3. The experience of the Bonneville Power Administration shows that once a rate is set it is practically impossible to increase it due to contractual obligations or political pressures.

We in Utah Power & Light Co. believe that the power should be sold at a price commensurate with its value to produce maximum revenues for repayment of project costs. If this is done, we are sure Congress will be more inclined to make appropriations to proceed with construction of the storage and participating projects in an orderly way.

For these reasons we respectfully request that appropriations for the Colorado River storage projects be made subject to the conditions that, in accordance with congressional intent, all power from the project be sold at a price consistent with applicable law as will produce maximum revenues without subsidy for any group or groups, private or public, for repayment of the funds appropriated by Congress for construction of the project.

My company is willing to negotiate with the Bureau of Reclamation for the purchase of a block of firm power at a price embracing the above concepts.

OFFERS TO SECRETARY OF THE INTERIOR

Attached to my statement, furnished you, is a copy of a letter addressed to the Secretary of the Interior, offering to wheel project power to load centers for preference customers. The rate quoted for such service is 1.55 mills per kilowatt-hour based on delivery at 138,000 volts and an annual load factor of 57 percent.

Government integration of the Glen Canyon and Flaming Gorge plants to transmit power to preference customers in Utah would require duplication of some 400 miles of our high-voltage transmission lines which we have offered to make available to carry project power to preference customers.

The other four utilities have also submitted to the Secretary offers to wheel and wheeling rates in their respective areas, copies of which are included in our filed summary statement.

On behalf of all of the companies represented here, I repeat the request made earlier that the authorization of funds by this committee for the transmission division of the Colorado River storage

project specify that no money shall be spent for survey, purchase of right-of-way or to commence construction of transmission facilities which will duplicate existing facilities or facilities to be constructed by the private companies.

For myself, and the representatives of the other four companies present, I wish to thank you for the opportunity of presenting our views on this subject.

Chairman HAYDEN. We thank you for a very interesting statement.

Any questions?

Senator BIBLE. I have none, Mr. Chairman, thank you.

Chairman HAYDEN. Do any of the other representatives of the companies you have spoken for desire to be heard?

Mr. NAUGHTON. I don't believe they desire to be heard. They asked me to represent them, and I know you are busy.

Chairman HAYDEN. Thank you.

COLORADO RIVER CONSUMERS POWER

Mr. Marion Wilson, president of the Colorado River Consumers Power, Inc., is the next witness.

COLORADO RIVER STORAGE PROJECT

STATEMENT OF MARION M. WILSON, PRESIDENT, COLORADO RIVER BASIN CONSUMERS POWER, INC.; ACCOMPANIED BY HARVEY F. McPHAIL, KULJIAN CORP.; L. M. ALEXANDER, SALT RIVER VALLEY WATER USERS ASSOCIATION; AND W. BERRY HUTCHINS, UTAH PREFERENCE USERS

INTRODUCTION OF WITNESSES

Mr. WILSON. Mr. Chairman and committee members, I am Marion M. Wilson of Fort Morgan, Colo., representing the Colorado River Basin Consumers Power, Inc., of which I am president.

I would like to introduce the following gentlemen who are here with us this morning:

From Arizona, Mayor Bert Brown, of the city of Mesa; Bert Freestone, of the city of Mesa; Leroy Killis, of the city of Mesa; Lee Mumford, of the city of Mesa; Mayor Kirkland, of the city of Safford; Mr. Powers, of the city of Safford; Vic Corbell, Salt River Water Users; Floyd Smith, Salt River Water Users; John Hooks, Salt River Water Users; L. M. Alexander, Salt River Water Users; R. J. McMullen, Salt River Water Users; E. K. Carpenter, Salt River Water Users; A. Van Wagenen, Arizona Municipal Power Users Association; Oakley Jordan, Arizona Municipal Power Users Association.

From Colorado, myself, president of the Colorado River Basin Consumers Power, Inc.; Howard Scott, manager, Colorado Rural Electric Association; D. H. Tremmel, manager, Tri-State Generation & Transmission Association.

From New Mexico, Philip N. Sanchez, Plains Generation & Transmission Cooperative, and Norton Davis, Plains Generation & Transmission Cooperative.

From Utah: W. Berry Hutchings, manager, Bountiful City Light & Power, and president, Inter-Mountain Consumer Power Association; K. J. Parkinson, manager, St. George City Electric and department treasurer, Inter-Mountain Consumer Power Association; Ray Brown, vice president and director, Moon Lake Electric Association, Inc.; Marion Ross, director and president, Moon Lake Electric Association, Inc.; I. W. Cramer, director, Moon Lake Electric Association, Inc., Ralph Taylor, director and vice president of Moon Lake; Ned Colthrop, Colthrop & Malner Investments, Roosevelt, Utah.

And from Wyoming: Harold Cash, president, Wyoming State Association.

Mr. Chairman, I would like the list of visitors of our group or the members of our group to be made a part of the record.

Chairman HAYDEN. That will be done.

(The list of members of group referred to follows:)

LIST OF WITNESSES

ARIZONA

Mayor Bert Brown, city of Mesa.
Bert Freestone, city of Mesa.
Leroy Killis, city of Mesa.
Lee Mumford, city of Mesa.
Mayor Kirkland, city of Safford.
Mr. Powers, city of Safford.
Vic Corbell, Salt River Water Users.
Floyd Smith, Salt River Water Users.
John Hooks, Salt River Water Users.
L. M. Alexander, Salt River Water Users.
R. J. McMullen, Salt River Water Users.
E. K. Carpenter, Salt River Water Users.
A. Van Wagenen, Arizona Municipal Power Users Association.
Oakley Jordan, Arizona Municipal Power Users Association.

COLORADO

Marion M. Wilson, president, Colorado River Basin Consumers Power, Inc.
Howard Scott, manager, Colorado Rural Electric Association.
D. H. Tremmel, manager, Tri-State Generation & Transmission Association.

NEW MEXICO

Philip N. Sanchez, Plains Generation & Transmission Cooperative.
Norton Davis, Plains Generation & Transmission Cooperative.

UTAH

W. Berry Hutchings, manager, Bountiful City Light & Power; president, Inter-Mountain Consumer Power Association.
K. J. Parkinson, manager, St. George City Electric; department treasurer, Inter-Mountain Consumer Power Association.
Ray Brown, vice president, Inter-Mountain Consumer Power Association; director, Moon Lake Electric Association, Inc.
E. J. Ballard, Jr., general manager, Moon Lake Electric Association, Inc.
Marion Ross, director and president, Moon Lake Electric Association, Inc.
I. W. Cramer, director, Moon Lake Electric Association, Inc.
Ralph Taylor, director and vice president, Moon Lake Electric Association, Inc.
Ned Colthrop, Colthrop & Malner Investments, Roosevelt, Utah.

WYOMING

Harold Cash, president, Wyoming State Association.

GENERAL STATEMENT

Mr. WILSON. I will go on with my statement.

Our organization previously known as the Upper Colorado River Preference Users Committee, represents over 1,250,000 preference consumers in the five States of Arizona, Colorado, New Mexico, Utah, and Wyoming—five States united in a common program.

We have been active on Colorado River storage project power matters during the past 2 years. We have given considerable time and study to this complex problem directly affecting the future of our area.

FEDERAL POWER TRANSMISSION SYSTEM

We believe a Federal power transmission system is a fundamental necessity for the successful operation of the Colorado River storage project, to assure project repayment, maximum assistance to participating projects and the delivery of power to major load centers of preference customers in the States of the Colorado River Basin at costs which will not adversely affect power rates to consumers.

Our preference user group has been very active on upper Colorado River power matters during the past 2 years. Our vital concern with this project is demonstrated by the fact that a few months ago we incorporated our organization, and retained the services of Mr. Harvey F. McPhail, a well-known engineering consultant who formerly was Assistant Commissioner of the Bureau of Reclamation. Mr. McPhail has studied these matters and prepared a formal engineering report for us.

With your permission, Mr. Chairman, I will ask Mr. McPhail to appear now. We have statements to file by delegates from Utah, Wyoming, Colorado, and New Mexico. I understand delegates from Arizona are scheduled to appear later this morning.

To conserve time, Mr. Chairman, I request your permission to file the balance of my statement, plus the statements of these other delegates.

Chairman HAYDEN. That may be done.

(The statements referred to follow:)

STATEMENT OF MARION M. WILSON, COLORADO RIVER BASIN CONSUMERS POWER, INC.

Mr. Chairman and members of the committee, I am Marion M. Wilson of Fort Morgan, Colo., representing the Colorado River Basin Consumers Power, Inc., of which I am president. We sincerely appreciate the opportunity to appear here today.

Our organization, previously known as the Upper Colorado River Preference Users Committee, represents over 1,250,000 preference consumers in the 5 States of Arizona, Colorado, New Mexico, Utah, and Wyoming—5 States united in a common program.

We have been active on Colorado River storage project power matters during the past 2 years. We have given considerable time and study to this complex problem directly affecting the future of our area.

FUNDAMENTAL NECESSITY

We believe a Federal power transmission system is a fundamental necessity for the successful operation of the Colorado River storage project—to assure project repayment, maximum assistance to participating projects and the delivery of power to major load centers of preference customers in the States of the Colorado

River Basin at costs which will not adversely affect power rates to consumers. We believe construction on such a system should begin this year in fiscal 1961.

Colorado Basin Consumers is organized to represent the thousands of customers served by nonprofit power systems in the Colorado River Basin area. We seek to expedite the two-way flow of information between administration agencies, the Congress, other interested groups and agencies and the actual consumers of power.

Our first project was to compile load data of preference users based on estimates furnished by the individual systems. This data has served to supplement load data of the Bureau of Reclamation and its accuracy is reflected in the close agreement between Bureau and Colorado River Basin Consumer figures.

These figures show that preference power users, including those in Arizona, can at all times use all project power.

A recent recheck of these estimates against actual purchases reveals that many systems exceeded their projected 1959 demand. While most of our systems are relatively small, they combine to form a dynamic and growing market for electric power, and this growth can only be enhanced by the general economic development contemplated in the project.

STATUS OF PROJECT

We are seriously concerned by the status of the power features of the storage project. Construction of the main stem units including generation facilities is progressing rapidly and interest on these power features is accumulating. Power sales will repay 91 percent of all project cost—yet the power transmission facilities of the project are a year behind. If construction is further delayed only a wasteful crash program, involving considerable strain on all segments of the electric equipment, apparatus and construction industry, would get the lines built before project generation began.

With the stipulations laid down by this committee in its report last year as a guidepost, this has been a busy year and largely productive.

By July 10, the Bureau outlined to all potential users a tentative transmission system and tentative power flows. This system closely resembled the one presented to this committee by the preference group in May of last year, so we had little to add to it.

The power companies, proceeding on much different preference user load data, reacted with their own outline which they presented to the Bureau of Reclamation on October 1 and to the consumer group on October 13.

This outline differed substantially from our program—and from the earlier position of the power companies which contemplated a Federal backbone transmission system, with some distribution over reasonably available company lines.

On December 15, we advised the companies and the Bureau that we could not consider the outline as a firm proposal because "it did not contain definitive proposals regarding quantities, costs, or terms and conditions under which power would be wheeled or delivered to preference users." To date, we have received no definitive reply to our request for cost data.

EVALUATING FURTHER DEVELOPMENTS

By December it became obvious that independent engineering assistance would be valuable to us in evaluating further developments or programs. We were fortunate to secure the services of Harvey McPhail, formerly Assistant Commissioner of the Bureau of Reclamation. His survey is contained in the Blue Book, "Federal Transmission System for Colorado River Storage Project as Proposed by Preference Customers," dated March 1, 1960, which has been supplied to you. It is our answer to the request for factual information.

On January 19, 1960, E. O. Larson, director of region IV, Bureau of Reclamation, forwarded a letter to the power companies containing five principles by which the companies' presentation was to be evaluated. The five principles follow:

"1. Lines must be of sufficient capacity to assure delivery of available power.

"2. There must be no interference with the ability of the Bureau to serve preference customers to the extent they would be served by federally constructed lines.

"3. Backbone lines must provide suitable integration among Federal project power facilities at the time required to meet project objectives and project use must at all times be the overriding consideration.

"4. Charges made for delivery of power must not adversely affect project feasibility and payout, and particularly must be such as not to reduce quantity or timing of irrigation assistance.

"5. If utilities construct the backbone high-voltage transmission lines, they must accept also the responsibility of providing transmission for delivery at lower voltages to load centers of preference customers to the same extent as would prevail under a federally constructed system."

A meeting was held on February 25 between the power companies and the Bureau when these principles and their effect on the companies' proposal were discussed.

DISCUSSION OF PRINCIPLES

A similar meeting was requested by the preference group and the principles were discussed in detail. As a result of this meeting preference customers left this meeting with the following understandings:

1. No firm power will be available to the companies since preference demand is equal to project output.

2. The estimated power rate of about 6 mills at major load centers will repay both the power cost with interest and the irrigation portion of main-stem units, within 50 years, and still provide the full schedule of assistance to irrigation projects in subsequent years.

3. With the same rate, the Bureau could afford only as much in wheeling payments as will not adversely affect project repayment.

4. A Federal system would serve all project needs including full irrigation assistance. Any substitute system must serve not only these project needs for a repayment period of from 85 to 100 years but must also provide equal service to load centers of preference users, without adversely affecting power rates.

These, in our opinion, are excellent yardsticks. We believe that the burden of proof should lie with any proposed alternate system since it involves wheeling over company systems of public power beyond any existing contract period. We cannot gamble the future of the Colorado storage project on contracts to be written many years hence.

BASIS FOR STUDY

Full study should be given to the companies' proposal—but study should be based on hard facts and not on the immediate appeal of a lowered Federal investment or potential taxes which can only be added to preference customer cost. From these very customers must come sufficient power revenues to provide 91 percent of the total repayment, including irrigation assistance.

These major facts—and others—account for the recommendation of Colorado River Basin Consumers Power, Inc., for an all-Federal system. We are requesting this committee for the addition of $5 million to the Transmission Division for fiscal 1961 so that the Bureau can begin construction of a line from Flaming Gorge to Oak Creek, Colo., and a line from Glen Canyon to Curecanti via Farmington, N. Mex. This request is for lines which all interested parties agree should be built by the Federal Government and which will be required for any system built.

GAPS IN TOTAL SYSTEM

Obviously, this leaves great gaps in the total system required. We believe that other lines are of equal importance. It should be noted no interconnection is provided between Glen Canyon, Provo, Utah, and Flaming Gorge or between this system and the Lower Colorado system (Phoenix and Glen Canyon), or the project and Bureau facilities in New Mexico (Farmington to Albuquerque), or the project and facilities in Wyoming (Flaming Gorge to Sinclair). A reasonable program would indicate the desirability of starting these lines also, which would require additional funds.

We apperciate this opportunity to present our thinking to this committee.

STATEMENT OF HOWARD SCOTT, COLORADO RURAL ELECTRIC ASSOCIATION OF DENVER, COLO.

Mr. Chairman and members of the committee, I am Howard Scott, manager of the Colorado Rural Electric Association of Denver, Colo.

The Colorado Rural Electric Association is pleased to appear before this committee to give our united support to the power transmission program for the Colorado River storage project outlined to you by Colorado River Basin Consumers Power, Inc.

We wish to fully support the recommended funds to initiate construction of the Curecanti unit and the participating projects as recommended in the budget and by the Colorado Water Conservation Board, the Upper Colorado Commission, and the Governor of Colorado.

The 22 rural electric systems in Colorado serve about a quarter of a million people. Sixteen now purchase their power either in whole or in part from the Bureau of Reclamation. Cooperatives located in northeastern Colorado receive power from Bureau lines of the western division of the Missouri Basin while the others receive service through wheeling arrangements between the Bureau and the Public Service Co. of Colorado.

Four cooperatives generate their own power in a central steamplant; three others supplement their leased plant with purchases from municipal systems and the Bureau. In all, Colorado cooperatives have about 65,000 kilowatt of active generation capacity.

Some of the cooperatives have immediate need for additional capacity or wholesale power. Others will require additional power in about 1963, the scheduled date for Flaming Gorge power.

All of the Colorado rural electric systems will be needing additional power by 1965, so that total power demand will compound rapidly as project generation comes on the line.

Realizing the magnitude of this power demand and the importance of the Colorado River storage project to Colorado, the rural electrics of Colorado were instrumental in the formation of Colorado River Basin Consumers, Inc., a group which could represent them and other preference users in the area of the project.

We base our support of an all-Federal system, not on an assumption that a Federal system is somehow magic or a gift from Washington, but rather on what we believe to be good sound economics and good business. We are convinced that an all-Federal system will best meet the requirements of the project and the needs of preference users. The Colorado River storage project vitally affects the future water development of the Upper Colorado Basin area, and any power system should be designed to provide maximum assistance to this water development.

It is urgent that construction of transmission facilities begin this year. Project construction has been underway for several years and delivery facilities must be available when project generation begins. We are about 1 year behind in all matters affecting the transmission division of the project. If construction is delayed another year, it will result in an uneconomic crash program to catch up.

We urge that at least $5 million be made available in the appropriation for fiscal 1961. This minimum sum covers the lines from Flaming Gorge to Oak Creek, Colo. and the Glen Canyon-Farmington-Curecanti-Poncha segment, which all parties have agreed should be constructed by the Federal Government.

We believe the other lines of the project, those to interconnect Glen Canyon, Provo, Utah, and Flaming Gorge, Flaming Gorge and the Bureau facilities in Wyoming, Farmington and the Bureau facilities in New Mexico, and the storage project system with the lower Colorado system, are of equal value.

We are urging that this committee, by suitable language in the bill or otherwise, make it clear that a Federal system be contemplated for construction and that the Bureau of Reclamation be instructed to proceed with the necessary engineering studies so that it can include in its future budget presentations the necessary funds and the specific lines to be built to meet power production and market requirements. Whatever system is built, it must be paid for by the ultimate customer. Conservative load data now conclusively demonstrates that preference users in the Colorado River Basin can at all times absorb all project power. We have a critical interest in the charge that must be paid by our customers.

Even with an all-Federal system, the estimated cost of wholesale power at a limited number of load centers is 6 mills. The projection of power to be sold in just 50 years, at 6 mills, will cost preference users $1,700 million wholesale. Every additional mill of cost at wholesale would be $5 million per year or a quarter of a billion dollars in just 50 years—and the ultimate period of the project will run nearly 100 years.

Equally, any reduction in this basic return to the Government for this power will take just as much away from project repayment or from assistance to participating projects. Thus, what might be listed as a small cost or repayment dif-

ference has an uncanny way of multiplying into millions of dollars in proper context.

This puts bone and muscle on our support of a Federal interconnection system. A Federal system will have but one purpose—one master to serve and that will be the project. It will require a minimum of contractual relations with other utility systems, yet it will insure delivery to users having a preference by law. Any joint system will involve a myriad of contractual relations and precise but complex electrical arrangements. We feel that only a system based solely on the needs of this complex project stretching over several States is equal to the task.

By this, we do not mean that there is no place for other utility systems. The investor utilities of the Colorado River Basin have maintained an interest in this project since its inception. They then advised the Congress that they would participate in transmitting project power to ultimate preference users from a Federal backbone transmission system. This offer has since been modified to include, under as yet undefined conditions, certain company portions of the backbone system.

The outline of this proposal shows little company line in Colorado and virtually no Federal line in the other States of the Colorado River Basin.

We believe that any proposal should bear the burden of proof that it will serve project purposes, irrigation assistance, and preference users as well as a Federal system. Congress itself took this position in the authorizing report (H. Doc. 1087, 84th Cong.) which stated:

"There (the companies') proposal provides essentially that the Secretary construct the backbone transmission lines connecting major powerplants of the project and that use be made of the existing system of the companies and additions thereto to market the power.

"The proposal is consistent with the policy expressed by the Congress for many years in appropriation acts and elsewhere whereby the Federal Government builds the basic backbone transmission system and distribution is made through existing systems where satisfactory arrangements can be worked out.

"Therefore, the committee expects the proposal by the private power companies for cooperation in the development to be carefully considered by the Department * * * and the electric power and energy of the project to be marketed, so far as possible, through the facilities of the electric utilities operating in the area, provided, of course, that the power preference laws are complied with and project repayment and consumer power rates are not adversely affected."

This is not a casual concern on our part. Following this congressional mandate, the Bureau of Reclamation has been studying the most recent proposal submitted by the investor group on October 1, 1959. To provide guidelines in this comparison, the Bureau forwarded to the investor group a five point policy statement [1] which we believe of such importance as to include in full:

"1. Lines must be of sufficient capacity to assure delivery of available power.

"2. There must be no interference with the ability of the Bureau to serve preference customers to the extent they would be served by federally constructed lines.

"3. Backbone lines must provide suitable integration among Federal project power facilities at the time required to meet project objectives, and project use must at all times be the overriding consideration.

"4. Charges made for delivery of power must not adversely affect project feasibility and payout, and particularly must be such as not to reduce quantity or timing of irrigation assistance.

"5. If utilities construct the backbone high-voltage transmission lines, they must accept also the responsibility of providing transmission for delivery at lower voltages to load centers of preference customers to the same extent as would prevail under a federally constructed system."

On December 15, 1959, the preference users, through the then existing Upper Colorado Basin Preference Users Committee, advised the investor group and the Bureau that they could not consider the companies' outline as a firm proposal because "it does not contain definitive proposals regarding quantities, costs or terms and conditions under which power would be wheeled or delivered to preference users."

We have not as yet received any definitive answer or costs from the investor group. In Colorado, our only measure of what might be proposed is

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[1] Letter from E. O. Larson, Director, USBR, region 4, to E. M. Naughton, Utah Power & Light Co., Jan. 19, 1960.

the wheeling toll now imposed—1 mill per kilowatt-hour for each 50 miles—a charge certainly not in keeping with the five principles stated above.

To briefly summarize the position of the Colorado Rural Electrics:

1. The Colorado River storage project is designed to develop the water resources of the Colorado River available to Colorado, New Mexico, Utah, and Wyoming. Even though power revenue will provide 91 perecent of project repayment, water development must at all times be the overriding consideration.

2. Our studies support an all-Federal backbone transmission system because it will serve these project needs, plus providing the maximum integration of this power system with other Federal power systems thereby resulting in full advantage of diversity of powerloads, waterflows, and system control.

3. A Federal backbone grid will also do much to smooth out the problems incident to the filling of Glen Canyon Reservoir by providing the best combination of water levels and power production at downstream plants as well as at Glen Canyon.

4. Construction should be initiated in fiscal 1961 on as much of the Federal system as possible to avoid an uneconomic crash program later and to insure delivery capacity in place when project generation begins, even though this will require an appropriation not contained in the budget request.

5. Study should continue on the balance of system lines under the clear policy stipulations of the Congress and the Bureau which require that project needs must be paramount.

The Congress and the people of the area supported this vast and complex reclamation project to bring overdue development to a great area. It should not now be used for private gain or partisan advantage.

We appreciate this opportunity to present our thinking to this committee. We pledge our continued effort to meet problems which may arise with a cooperative spirit.

STATEMENT OF HAROLD CASH, WYOMING STATE RURAL ELECTRIFICATION ASSOCIATION

Mr. Chairman and gentlemen of the committee, my name is Harold Cash. I represent the Wyoming State Rural Electrification Association and appear here today to acquaint the committee with the views of our organization relative to the development of the necessary transmission system and marketing criteria of the Colorado River storage project.

The Wyoming State REA Association has joined with the other preference power users in Colorado, Utah, New Mexico, and Arizona to form the Colorado River Basin Consumers Power, Inc. This organization and its members have proposed an agreement to purchase from the U.S. Bureau of Reclamation the entire output of power from the Colorado River storage project at firm power rates and have also had an engineering study made regarding the construction of a federally owned transmission system for the Colorado River storage project. These proposals by the preference users recognized the Government's need to obtain the highest possible revenue from the project to permit prompt repayment of the Government's investment.

The transmission system referred to, we believe, is in keeping with the authorizing legislation of the Colorado River storage project and that it should be constructed and operated by the U.S. Bureau of Reclamation. Federal control of the transmission system would be the only way that the power from the Colorado River storage project powerplants could be utilized to the fullest extent and in the most efficient manner. We believe that it is to the best interests of the preference consumers and of the United States that these and other lines from the powerplants of the projects be constructed by the Government because the operation of a complex power system of this nature requires that close coordination of the powerplants and transmission systems be maintained and would also permit the Bureau to take full advantage of the diversity of loads between the north and south basin States where peakloads occur at different seasons of the year.

Such a transmission system would transmit power to the load centers of the preference consumers, who have stated they would purchase the entire power output of the project. It would also provide interconnection between the powerplants of the project, thus permitting their fully integrated operation and would make possible interconnection between the Colorado River storage powerplants and other federally owned power systems in the West that would stabilize the

systems and enable the Bureau to take advantage of the interchange of seasonal diversity.

The private utilities operating in the basin States have presented a proposal for construction of a portion of the transmission system. We as preference consumers are opposed to their proposal as it could only result in the following:

1. Higher consumer power costs.
2. Lower revenue to the Colorado River storage project, thereby increasing the payout period of the project.
3. Would not permit diversity, except at excessive cost, between preference consumers in the upper and lower basin States.
4. They would interfere with the ability of the Bureau to serve preference customers to the extent they would be served by federally constructed lines.

Their proposal states that they would have the expensive lines constructed by the Government, lines that would not reach into the load centers and that would not meet the requirements of the U.S. Bureau of Reclamation, "That the power preference laws be complied with and that project repayment and consumers power rates are not adversely affected."

You have been supplied with copies of an engineering study made by Mr. Harvey McPhail of the Kuljian Corp., of Philadelphia, Pa. This study, "Federal Transmission System for Colorado Storage Project as Proposed by Preference Consumers," states clearly our views for the development of a Federal transmission system that we believe would be in accord with the intent of Congress when they authorized development of the Colorado River storage project.

The engineering report shows, and we are sure you are aware of it, that Flaming Gorge is scheduled for initial operation in June of 1963 and that Glen Canyon is scheduled for initial operation in June of 1964. This, of course, means that the proposed lines from Flaming Gorge to Oak Creek and from Glen Canyon to Curecanti must be started this year if they are going to be ready to transmit the initial power from the projects. Construction of the complete Federal transmission system should also be considered and the U.S. Bureau of Reclamation should be instructed to include in its future budget presentations funds to complete such a system in time to meet power marketing requirements.

We therefore respectfully urge the committee to request that at least $5 million be made available in appropriations for 1961 so that market requirements of initial power from the units can be met and that future appropriations be established for the completion of the transmission system.

STATEMENT OF A. VAN WAGENEN, JR., PRESIDENT OF ARIZONA MUNICIPAL POWER USERS ASSOCIATION

Mr. Chairman and gentleman of this committee, my name is A. Van Wagenen, Jr. I am president of the Arizona Municipal Power Users Association, a voluntary nonprofit organization made up of power customers in Arizona entitled to preference under reclamation law and currently using Federal hydroelectric power and energy. The association was chartered in 1958 with a main objective of assisting its members in the obtaining of electric power and energy for their respective customers.

Current membership consists of three municipalities having a combined population in excess of 50,000, an irrigation district, 4 electrical districts, and 6 electric co-ops. The combined electric load of these customers is currently about 200,000 kilowatts and substantial growth is expected. The association membership when combined with the Salt River project, includes most of the preference customers in the State—providing electric power to considerable portions of 10 of Arizona's 14 counties.

I appreciate the opportunity to present the views of the Arizona Munipical Powers Users Association relating to the necessity of a Federal transmission system to deliver Colorado River storage project power to the preference customers.

The members of the association are currently being served over combined facilities of the Parker-Davis project of the Bureau of Reclamation and of the individual members. The present allocation of Colorado River power is inadequate to meet the needs of all of the preference users in Arizona and we are therefore seeking new sources to fulfill our requirements. Since the preference loads in Arizona are within reasonable marketing distance from Glen Canyon

Dam, it appears natural that we would look to that source for additional power and energy.

We were advised that the preference customers in the upper basin, comprising Colorado, New Mexico, Utah, and Wyoming, would not utilize all of the CRSP power in the early years of the project. We therefore joined the Colorado River Basin Consumers Power, Inc., to assist in establishing a five-State marketing area for CRSP power. We and the Salt River project can absorb the excess energy available from CRSP from the time such power is available, and are willing to pay firm rates for such power.

In urging you to consider a transmission system which will connect our present systems to this newly developed source, we are aware of the private utilities' proposal to absorb this excess energy into their system. We are also aware that these same people are proposing that this excess energy be sold to them at nonfirm rates—maybe even as low as fuel replacement costs. In contrast to this, we, the preference users, stand ready and willing to buy this excess energy at firm rates. The utility offer could represent a sizable decrease in revenue to the storage project—depending upon just what the utilities will pay. Any sale at less than firm rates will be detrimental to irrigation and other developments in the upper basin and could delay repayment of the project.

Our group strongly recommends that the Federal Government construct the transmission system from the Government's generating plants to the marketing area since no power will be available to the nonpreference customers. We see no purpose in interposing a privately owned transmisison system which will have the effect of a permanent "toll gate" on all the energy which the preference users would utilize.

We further favor a federally owned and operated system to permit flexibility of operation and better overall system of efficiency. A privately owned system would have to serve first the needs of the owner and second those of the preference customers and the Bureau of Reclamation's interchange operations.

The interconnection of the CRSP system with the lower basin system by a Federal system would comply with desires of the Congress as outlined in Public Law 485 which in essence states that the Secretary shall interconnect systems of the Federal Government both present and future for the purpose of maximizing firm power generation from the whole Colorado River. This coordination between the upper and lower basin is emphasized again in the proposed Glen Canyon filling criteria, recently released by the Secretary of the Interior.

In offering to purchase the excess CRSP power and energy at firm prices, we are hopeful that a permanent allocation will eventually be made to Arizona. We are aware that a large block of the power which would be available to Arizona initially would ultimately be withdrawn to meet upper basin needs. We concur with this withdrawal down to an amount which might be considered as a reasonable permanent allocation to Arizona.

The importance of securing an adequate supply of low cost power for Arizona preference users cannot be stressed too highly. Arizona's diversified agriculture is faced with the problems of increased irrigation pumping requirement, higher labor costs and intense competition for markets. The municipalities, facing tremendous increases in population, are strained to provide dependable water supplies as well as other utility services. We feel that a reasonable supply of low cost power is essential for the continuation of Arizona's growth.

In conclusion our group believes that obtaining hydropower from the new Federal developments on the Colorado River is a definite necessity. This power we believe should be delivered over a Bureau of Reclamation transmission system because such a system will provide maximum hydropower to a maximum number of preference customers at a minimum cost and will provide greatest possible revenues for project repayment. The entire power features of the storage project including the Government-owned transmission system are economically feasible and costs will be repaid to the Treasury with interest.

We therefore request the Congress to appropriate $5 million for the immediate start on the lines from Glen Canyon to Farmington to Curecanti and Flaming Gorge to Oak Creek. We further urge that additional funds be provided this fiscal year for designs, surveys, and rights-of-way to assure that lines to the five major load centers in Arizona, Colorado, New Mexico, Utah, and Wyoming will be constructed and ready when power becomes available.

Thank you.

STATEMENT OF NORTON DAVIS, MANAGER, PLAINS ELECTRIC GENERATION AND TRANSMISSION COOPERATIVE

My name is Norton Davis. I am the manager of the Plains Electric Generation and Transmission Cooperative, Inc., at Albuquerque, N. Mex. The Plains cooperative is a generating cooperative and provides power to 11 member cooperatives covering more than one-half of the total area of the State of New Mexico.

We are presently connected to the Bureau of Reclamation Rio Grande project system at Albuquerque and power to our southern cooperatives is delivered over the Bureau lines. Power to the other sections of the State is delivered over our own transmission lines. Due to the tremendous growth of power requirements in the area covered by our system, it is impossible for us to plan for future needs and requirements until information is released by the Bureau as to the allocation of power which will be available out of the Upper Colorado River Basin project, and especially from the Glen Canyon Dam, and as to the rate at which this power can be made available.

We have worked closely with the preference users in the States of Wyoming, Utah, Colorado, and Arizona in endeavoring to present a plan which will provide for the maximum use of the hydropower developed under the project. Recently the preference users group employed the Kuljian Corp., a firm of engineers, to prepare a study of the Colorado River storage project and to make recommendations with respect to the transmission facilities necessary to deliver the project power to the preference customers, as authorized under the act of Congress authorizing the project. We would like for Congress, in accordance with the recommendations contained in this report, to instruct the Bureau to proceed with the design and construction of transmission lines, including lines from Glen Canyon to Phoenix, and to Salt Lake City in Utah, together with a line extending from Farmington to Albuquerque. If these lines are built as recommended in the report, full utilization of the maximum amount of power developed in the Glen Canyon project will be possible.

It is our understanding that the Bureau of Reclamation has estimated that the funds required for initial construction in this year would be $5 million, with an additional $5 million needed for future planning and construction.

We urge that the committee appropriate to the Bureau of Reclamation $10 million for initial construction of the lines as recommended in the Kuljian report. We also urge that the committee instruct the Bureau of Reclamation to proceed with the design and construction of the backbone transmission lines in the upper basin States so that the ultimate use of the power from the Glen Canyon project can be made, and that the money which has already been appropriated be released for immediate construction.

STATEMENT OF JULIUS C. SANCHEZ, PRESIDENT, NEW MEXICO RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. Chairman and members of the committee, my name is Julius C. Sanchez, and I am president of the New Mexico Rural Electric Cooperative Association.

The 17 New Mexico rural electric cooperatives provide service in over 90 percent of the geographic area of New Mexico. They serve some 200,000 citizens of the State. New Mexico is sparsely populated and these cooperatives have an investment of approximately $1,000 per connected meter. Due to this large investment, per connected meter, they need low cost power. The Glen Canyon facilities can supply this power.

Private utilities should be just that—private utilities. They should provide for the generation and transmission of such power necessary to serve their franchised, guaranteed profit, service areas. On one hand they condemn the Government for the development of the Nation's resources, and on the other hand they maneuver to control the power developed through these programs. These attitudes are not consistent.

If the power made available through the Upper Colorado project is to be equitably and economically delivered to the preference customer, the Bureau of Reclamation must own, operate, and control the transmission grid. Small segments, owned by private investors, cannot be interposed. In relation to the cost of the overall program, the savings in line construction to the Government

(should private power build these lines) would be negligible; the cost to the Government and the preference consumers, unwarranted.

While it is the policy of the present administration to utilize capacity in existing transmission facilities to wheel power, I cannot believe it was the intent to permit the private companies to rapidly build new facilities to siphon these resources for their own use.

I, therefore, urge the members of this committee to recommend the appropriation of adequate funds, in fiscal year 1961, to permit the Bureau of Reclamation to build the transmission grid necessary to wheel all power generated by the Colorado River storage project.

Thank you.

STATEMENT OF PHILIP N. SANCHEZ

My name is Philip N. Sanchez. I am president of the Board of trustees of the Plains Electric Generation & Transmission Cooperative, Inc., at Albuquerque, N. Mex., and am also one of the organizers and a member of the board of trustees of the Mora-San Miguel Electric Cooperative located in northeastern New Mexico.

The Mora-San Miguel Electric Cooperative is a distribution cooperative and was one of the first organized in the State. It was originally organized in 1941 and commenced operations in 1946. At the time we commenced operation we were dependent for our source of power upon a privately owned utility operating in this area and were so dependent until the commencement of operation by Plains Electric Generation and Transmission Cooperative, Inc., in 1955. During all of the time in which we were dependent upon this private utility for our source of power, we were continually harassed and our growth and development hampered by reason of the apparent unwillingness of the private utility to make available adequate power at reasonable rates. Our average wholesale rate for the purchase of power was 1.7 cents and we were continually threatened with curtailment or disconnection of power supply. I mention these facts only because we are sometimes inclined to lose sight of the difficulties encountered by rural cooperatives in attempting to make power available in areas where they are completely dependent upon a private power company for their source of power. It has been our experience that the primary purpose of the private utility has been to establish and maintain a power monopoly and that the needs of the customers and the welfare of the area served is of secondary importance.

Since the organization of the Plains Electric Generation & Transmission Cooperative, Inc., and since power has been available from this source, our cooperative has more than doubled its power requirements and economic development in the area as a result of availability of power and decreased costs. This has contributed immeasurably to the welfare of the people in the area served.

The Plains Electric Generation & Transmission Cooperative, Inc., serves 11 member cooperatives in the State of New Mexico, consisting of the Otaro County Electric Cooperative, with headquarters at Alamogordo, N. Mex.; Columbus Electric Cooperative, with headquarters at Deming, N. Mex.; Sierra Electric Cooperative, with headquarters at Truth or Consequences, N. Mex.; Socorro Electric Cooperative, with headquarters at Socorro, N. Mex.; Continental Divide Electric Cooperative, with headquarters at Grants, N. Mex.; Jemez Mountains Electric Cooperative, with headquarters at Espanola, N. Mex.; Northern Rio Arriba Electric Cooperative, with headquarters at Chama, N. Mex.; Central New Mexico Electric Cooperative, with headquarters at Mountainair, N. Mex.; Kit Carson Electric Cooperative, with headquarters at Taos, N. Mex.; Springer Electric Cooperative, with headquarters at Springer, N. Mex.; and Mora-San Miguel Electric Cooperative, with headquarters at Mora, N. Mex.

In most of the area served, covering more than one-half of the whole State, the needs for power are increasing at such a rate that it is imperative that an immediate determination be made as to how the additional power requirements are to be served. We in the Plains Cooperative have made extensive studies in order to try and determine what method of approach to use in solving the power problem. We have participated actively in the planning program of the Upper Colorado River Preference Users Committee in order to determine to what extent power could be made available to New Mexico, and particularly to us as preference users under the Colorado River storage project. We have always

supported the program of the Bureau of Reclamation in recommendations made to Congress for the construction of backbone transmission lines necessary to the distribution of project power and to the protection of preference customers as contemplated under the act. We believe that the recent report of the Kuljian Corp. outlines the basic requirements necessary for this purpose.

We strongly urge that in the consideration of any proposal that the Bureau of Reclamation be given the ability to transmit power out of the project and to protect the preference users without dependence upon transmission facilities provided by private power companies, as experience has shown that dependence upon private power companies for the source of wholesale power does not permit adequate service.

Much has been said in the proposals made by the private power companies looking toward the construction of vital segments of transmission systems with respect to savings in construction costs and in taxes which would be paid by the private power companies. We do not believe either to be valid arguments—first, because the savings in construction costs would be more than offset in wheeling charges; and, second, the taxes paid would be merely added on as a part of the cost of power to the preference users or ultimate customers.

Besides, there is the very real possibility that the availability of power to the preference customers may be curtailed or even stopped by reason of the lack of capacity in the lines, which are primarily designed for the use of the power companies owning them.

Since it is obvious from the information presented to this committee that the needs of preference users in the Colorado River Basin States, including New Mexico, are more than sufficient to absorb all of the power generated under the project, the ability to transmit the power over owned or controlled lines is of the utmost importance.

Insofar as New Mexico is concerned, if full use is to be made of the portion of the project power allocated to it, an immediate determination must be made, not only that the State is entitled to preference power and the amount of the allocation, but also that transmission facilities are such as to insure the delivery of power to it as a preference customer. In addition, since we are already connected with the Bureau of Reclamation Rio Grande project at Albuquerque, N. Mex., the construction of that portion of the line from Glen Canyon to Farmington and to Albuquerque would considerably increase the value of this system as a power source in the area and would enable us to plan our power development in such a way as to make full use of project power.

STUDY OF POWER REQUIREMENTS

STATEMENT OF HARVEY F. McPHAIL, MANAGER, HYDROELECTRIC DIVISION OF THE KULJIAN CORP., PHILADELPHIA, PA.

GENERAL STATEMENT

Mr. WILSON. And I will call upon Mr. McPhail for his testimony at this time.

Chairman HAYDEN. Very well.

Mr. WILSON. Mr. McPhail.

Mr. MCPHAIL. Mr. Chairman and gentlemen of the committee, my name is Harvey F. McPhail, manager of the Hydroelectric Division of the Kuljian Corp. of Philadelphia, Pa.

As we have just informed the House Subcommittee on Appropriations, the Kuljian Corp. was retained by the Colorado River Basin Consumers Power, Inc., in December 1959, to conduct a study to determine the power requirements of customers having preference under reclamation law in the area tributary to the Colorado River storage project hydroelectric developments and to recommend a transmission system for the project which would best fit their needs. Such a study has been made and the results incorporated in a report dated March 1, 1960, copies of which have been distributed to the committee.

Briefly, this report demonstrates that the preference customers in the five States of Arizona, Colorado, New Mexico, Utah, and Wyoming can absorb and use all of the power to be generated by the presently authorized hydrolectric plants of the project from the date of initial operation. The preference customers agree that such use will be at the firm rates established for the sale of power this achieving the most favorable results in project repayment and expediting the construction of the participating projects.

ESTIMATED COST

The transmission system proposed has an estimated cost comparable with estimates made by the Bureau of Reclamation and is wholly in keeping with the spirit and intent of the authorizing legislation. It will accomplish the following objectives:

1. Transmit power to strategically located load centers from which the preference customers can take it to their various loads.
2. Provide interconnection between the hydroelectric plants of the project, thus permitting their fully integrated operation.
3. Provide interconnection over federally owned lines between presently operating federally owned systems, including the western division of the Missouri Basin project in Colorado and Wyoming, the Rio Grande project in New Mexico, the Boulder Canyon project in California and Nevada, and the Parker-Davis project in Arizona. This arrangement will permit the Government to reap full advantage of the diversity in loads between north and south, where peaks occur at different seasons of the year, and between east and west, where time zones influence peak periods. Also, full advantage can be taken of the diversity in precipitation affecting water supply in the various drainage basins; and
4. Permit convenient extensions to connect with additional hydroelectric plants which may be authorized for future incorporation in the project and with yet to be authorized transmountain diversion projects such as the Frying Pan-Arkansas and the San Juan-Chama.

CONNECTION WITH PARKER-DAVIS TRANSMISSION SYSTEM

We wish to stress the vital importance of the connection with the Parker-Davis transmission system. The problem of filling the Glen Canyon Reservoir is complicated and difficult. The magnitude of runoff during the filling period controls both the number of years required to achieve proper operating levels and the ensuing power output at Glen Canyon in combination with all plants on the Colorado River below, particularly the Hoover powerplant.

Interconnection of large capacity will have an important effect during this period in preserving the best combination of water levels and minimizing or eliminating deficiencies in power output for all concerned.

Three lines capable of transmitting about 500,000 kilowatts have been shown for initial construction from Glen Canyon to the Phoenix area. These are essential to effect the interconnection with the downstream plants and to permit the absorption of early production of Colorado River storage project power in Arizona.

Suggestion is also made that two of these lines later be transferred to the potential Marble Canyon development of about 350,000 kilowatts

capacity just below Glen Canyon with proper credit of investment to the Colorado River storage project. Due to its highly economical characteristics, we believe the Marble Canyon development is certain for early development and equivalent lines will be required to carry its output away. Arizona interests have indicated their desire to purchase these lines if the Federal Power Commission grants them a license for this development.

PRIVATE UTILITIES' PROPOSAL

As you gentlemen are aware, the private utilities operating in the Colorado River Basin and adjoining areas have presented a proposal for the construction of a transmission system. The preference customer group represented here is opposed to that private utility proposal. They believe it is not in their interest or that of the project and not in keeping with the spirit and intent of the authorization act in the following respects:

1. It does not provide a federally owned or controlled transmission grid interconnecting the authorized plants of the project and other Federal powerplants in the area and, therefore, the Federal Government would not have the full and free use of the lines to achieve the maximum of power integration unless substantial payments were made for transmission of the power and energy involved.

2. It proposes that the Federal Government, at its expense, construct certain expensive lines, involving over 40 million—or about one-third of the total—through difficult and relatively uninhabited areas. Such Federal lines would not reach any large load centers and would interconnect only the Glen Canyon and Curecanti developments. They would not connect directly with any other Federal systems and would have no independent operating value since utility systems would control.

3. The repayment of the project would be adversely affected since the project would be entirely hemmed in by a complete belt of utility lines leaving the Government with less than full freedom of power sales. The utilities have given no indication of being willing to pay firm rates for any power available to them and would have little incentive to do so if they are in control of all outlets beyond these Federal lines.

4. No charges for transmitting power for preference customers had come to my attention before the hearing this morning. I still do not know whether the utilities intend to use as a basis for these charges full utility costs, costs based upon sharing of line capacity, or incremental costs related to those which they consider would be required for their own transmission needs.

It is hard to conceive under any circumstance how these charges could be as low as those related to a complete Federal system and therefore would adversely affect costs of power to preference customers.

BASIS OF UTILITY PROPOSAL

The utility proposal was based upon the assumption that Arizona would not be included in the market area and that preference customer loads would be such that the utilities would have available 84 percent of the project power in 1965 and 33 percent by 1980.

In view of careful market studies conducted by the preference customers and the Bureau of Reclamation, it appears that with Arizona included in the market area no project power will be available for the utilities at any time. We cannot but wonder what justification, from an investor's standpoint, is present under these circumstances for the private utilities making the necessary very large investment in transmission facilities.

The preference users in Arizona have expressed themselves as being ready and willing to absorb the unused output of the Colorado River storage project on either a permanent or a temporary basis from the day it is available, and at firm prices. This represents increased revenues of the highest importance to the project in early years, perhaps as much as $50 million more than could be anticipated if sales to the utility systems only was possible.

BASIC CONCEPT OF GOVERNMENT'S APPROACH

A basic concept in the Federal Government's approach to the financial operation of a multipurpose project is the maintenance of a uniform rate level throughout the repayment period. Thus, after the power investment is repaid with interest, an annual amount equal to the annuity previously paid for this purpose is available for credit against the repayment of the cost of the storage and participation projects. As about 91 percent of such costs must come from power revenues, its importance is evident.

If the private utilities build the transmission system and make a continuing charge for transmitting the power, this increment of repayment will be lost. It amounts to about $6 million per year and totals from $240 million to $330 million over repayment periods of from 40 to 45 years after power investments have been amortized.

The need for immediate initiation of transmission line construction is urgent. Flaming Gorge is scheduled for initial operation in June 1963. A line must be ready by that time if power is not to be bottled up. Even with money available by the early fall of calendar year 1960, none too much time is available.

Glen Canyon is scheduled for initial operation in June 1964. Due to the heavy, high-voltage type of construction involved, funds should also be available this calendar year to permit a reasonable schedule of construction.

We have urged the House committee to make at least $5 million available in the appropriations for fiscal year 1961 for this purpose.

It should be noted that the lines contemplated under this minimum appropriation are those from Flaming Gorge to Oak Creek and Glen Canyon to Farmington and Curecanti, which the utilities have indicated should be constructed by the Federal Government. This is in keeping with the edict of the House committee in its report on the fiscal year 1960 bill but does not, in our opinion, represent an adequate program.

SUGGESTED CONSTRUCTION

We believe it is reasonable that consideration should also be given in fiscal year 1961 to starting construction of the following lines: Flaming Gorge to Sinclair, Flaming Gorge to Provo, Glen Canyon to Provo, Farmington to Albuquerque, and Glen Canyon to Phoenix.

In order to avoid future protests and debates and present the Bureau with a clear-cut program of procedure, we also respectfully urge that

this committee, by suitable language in the bill, or otherwise, indicate that the construction of a complete Federal transmission system be contemplated and that the Bureau of Reclamation be instructed to proceed with the necessary engineering studies and include in its future budget presentations requests for the necessary funds to complete the system in time to meet power production and market requirements.

That concludes my statement, Mr. Chairman.

Chairman HAYDEN. Do you have any questions?

Senator BIBLE. I have no questions, Mr. Chairman.

I just want to say that I am pleased to see Mr. Harvey McPhail here. He is a Nevada citizen, and a man who has studied power problems.

Mr. WILSON. The next witness is Mr. W. Berry Hutchings, Bountiful, Utah. He has a statement he would like to present, please.

COLORADO RIVER STORAGE PROJECT

STATEMENT OF W. BERRY HUTCHINGS, PRESIDENT, INTERMOUNTAIN CONSUMER POWER ASSOCIATION, AND MANAGER, BOUNTIFUL CITY LIGHT & POWER FOR THE CITY OF BOUNTIFUL, UTAH

GENERAL STATEMENT

Mr. HUTCHINGS. Mr. Chairman and gentlemen of the committee, my name is Berry Hutchings. I am president of the Intermountain Consumer Power Association; representative director for Utah and vice president of Colorado River Basin Consumers Power, Inc., formerly appearing before this committee as Upper Colorado River Preference Users Committee. I am manager of Bountiful City Light & Power for the city of Bountiful, located 10 miles north of Salt Lake City, Utah.

Gentlemen, I would like to explain the many benefits the preference users in Utah would experience through the construction of transmission lines by the Federal Government as a part of the Colorado River storage project.

Our association, composed of 35 municipal electric systems and 4 rural electric cooperatives, appreciates this opportunity to give to this committee examples of the serious problems which exist within our State. We are confident that these problems could be corrected if effective competition existed in Utah.

Intermountain Consumer Power Association was incorporated under Utah State Law the 11th day of May 1957 at Salt Lake City, as a voluntary nonstock, nonprofit organization for the purpose of rendering to the consumer owned and operated electric light and power utilities of the municipalities and rural electric cooperatives within the State of Utah such services as may be beneficial and desirable and in their best interest; to aid and advise in procurement of electric power and energy for the members and their respective customers; to advise and assist in the constant struggle to survive under the shadow of the private power monopoly that exists within our State.

LACK OF COOPERATION BY PRIVATE UTILITIES

The existence of 35 municipal electric systems gives evidence that for years there has existed a total lack of cooperation and willingness to serve by the private utilities. This condition continues to exist.

There are only three small Federal-owned hydrogenerating units in the State of Utah. These units are in operation at the Deer Creek project in Provo Canyon, Gateway, and Wanship on the Weber project in Weber Canyon.

Power being generated at these projects is being sold direct to the private utility at this time.

The utility refused to enter into any wheeling arrangement for the delivery of power to our association.

With your permission, may we again refer to my original statement. Items 1 and 2 under the heading "Summary" on page 5, which is as follows:

1. Bring a cheaper source of power to the ultimate users.
2. Establish within Utah a competitive condition which does not now exist.

Utah is the only Western State that does not participate or benefit from the energy developed by a Federal project. There are no Federal transmission lines in the State of Utah. This results in the municipal and REA cooperative systems paying one of the highest rates for resale power in the United States.

OTHER RESTRICTIONS

Our consumer-owned utilities are faced with other restrictions brought about by the private power monopoly, such as a wholly owned subsidiary charging rates substantially higher than those of the parent company; discriminatory rates; contracts written on "what the traffic will bear" principles, and long-term contracts with highly restrictive clauses and penalties.

We are convinced that development of the Colorado River storage project and the construction of transmission lines in Utah will effect a competitive condition obviously needed.

In conclusion, we are mindful of the many responsibilities of this committee and the many problems and requests you receive. We are regardful of the importance of economic investing of public funds. This is also one of our responsibilities as public servants and we are in accord with your endeavors to invest only for the development of projects that are self-supporting.

We therefore urge your favorable consideration to the request of this association to appropriate at least $5 million to be made available for fiscal year 1961 to initiate orderly and efficient construction of the transmission lines running from the Flaming Gorge terminal station to Oak Creek, Colo., and from Glen Canyon to Farmington, N. Mex., thence to Poncha Junction via Curecanti.

The members of the Utah association recognize that for them to participate in the advantages of the Federal system it will be necessary also to start the balance of the transmission lines.

Therefore, we respectfully request this committee to direct the Bureau of Reclamation to proceed immediately with the necessary engineering studies, right-of-way acquisitions, and initial construction of the lines from Flaming Gorge to Provo, Utah; Provo to Glen Canyon; Flaming Gorge to Sinclair, Wyo.; Glen Canyon to Phoenix, Ariz.; and from Farmington to Albuquerque, N. Mex.

Delaying the development of the Colorado River storage project in this important aspect will further delay the realization of the re-

turn of the investment and the funds necessary for the development of present and future participating projects.

Gentlemen, I thank you very much for your attention.

PREPARED STATEMENT

Mr. Chairman, with your permission I would like the balance of my statement to be filed for the record.

Chairman HAYDEN. Thank you for your statement.

(The statement referred to follows:)

STATEMENT OF W. BERRY HUTCHINGS

Mr. Chairman and gentlemen of the committee, my name is W. Berry Hutchings, I am president of the Intermountain Consumer Power Association, Representative director for Utah and vice president of Colorado River Basin Consumers Power, Inc., formerly appearing before this committee as Upper Colorado River Preference Users Committee. I am manager of Bountiful City Light and Power for the city of Bountiful, located 10 miles north of Salt Lake City, Utah.

Intermountain Consumer Power Association was incorporated under Utah State law the 11th day of May 1957 at Salt Lake City, as a voluntary nonstock, nonprofit organization for the purpose of rendering to the consumer owned and operated electric light and power utilities of the municipalities and rural electric cooperatives within the State of Utah, such services as may be beneficial and desirable and in their best interest; to aid and advise in procurement of electric power and energy for the members and their respective customers; to advise and assist in the constant struggle to survive under the shadow of the private power monopoly that exists within our State.

Utah has a total of 35 municipal owned and operated light and power systems and 4 rural electrification association systems within its State boundaries.

They are as follows:

Beaver City	Beaver County
Blanding City	San Juan County
Bountiful City	Davis County
Brigham City	Box Elder County
Ephraim City	Sanpete County
Fairview City	Sanpete County
Fillmore City	Millard County
Heber City	Wasatch County
Helper City	Carbon County
Holden City	Millard County
Hyrum City	Cache County
Kanosh City	Millard County
Kaysville City	Davis County
Lehi City	Utah County
Logan City	Cache County
Manti City	Sanpete County
Mantua City	Cache County
Meadow City	Millard County
Monroe City	Sevier County
Monticello City	San Juan County
Morgan City	Morgan County
Mount Pleasant City	Sanpete County
Murray City	Salt Lake County
Nephi City	Juab County
Oak City	Millard County
Parawan City	Iron County
Payson City	Utah County
Perry City	Box Elder County
Price City	Carbon County
Provo City	Utah County
Salem City	Utah County
Spanish Fork City	Utah County
Spring City	Sanpete County
Springville City	Utah County
St. George City	Washington County

RURAL ELECTRIFICATION COOPERATIVES

Escalante Power Association	Beryl	Iron County
Flowell Electric Association	Fillmore	Millard County
Garkane Power Association	Richfield	Sevier County
Moon Lake Electric Association	Vernal	Uintah County

The combined population served by this group is over 200,000. The present power requirement exceeds 100,000 kilowatts of demand and more than 450 million kilowatt-hours of electrical power yearly. Of this amount approximately 50 percent is purchased from private utilities at costs well above national average.

Due to the very rapid rate of growth, both in population and power consumption, also the continued increase of power costs, we are therefore seeking additional sources of economic power to meet and fulfill our needs.

The Intermountain Consumer Power Association turned their attention and full support toward the full development of the Colorado River storage project.

We greatly appreciate the honor and privilege of meeting with this committee to present the views of the association.

ECONOMICS

The association's first concern is: "The ability of the project to pay back to the U.S. Treasury the funds, plus interest, used to develop same."

The investment necessary for generation has been determined. Also a tentative cost per kilowatt-hour has been established which is required in order to pay back this investment with interest. The problem at hand now is who should make the investment and control the carrier necessary for marketing the power generated.

Our views on this are: The preference load requirements of the States of Arizona, Colorado, New Mexico, Utah, and Wyoming are large enough to absorb the entire production of power on the Colorado River project at all phases of development.

We accept the fact that a tentative cost of 6 mills has been established for the firm power. We, as preference customers, realize that the greatest return of moneys to the Treasurer will be derived from the sale of firm power. We are in the market for allocation of this power.

It is conclusive that there will be no power available to private power utilities. We are amazed that they should offer to make staggering investments in transmission lines for wheeling purposes only. We cannot see where it is possible for them to expend large sums of money for this service without operating at a great loss, that is, if their cost for wheeling is maintained the same as is proposed in the federally owned system. The loss may mean very little to the private utilities, because it would be very elementary for them to hide the deficit in their systems financial report and the loss load would be carried by other ratepayers in elevated rates.

It is our conviction that the earliest financial repayment of this project, and to accumulate the largest amount of surplus funds at the earliest possible date to aid in development of other participating projects can only be achieved through the development of a federally owned transmission system.

OPERATION

We are seriously concerned and alarmed in regards to the handicaps and hardships that will exist through private utility development of transmission lines.

It is clear and apparent that a utility-developed transmission line will be designed for the sole use of the utilities need in mind. It will establish a definite "tollgate" which would impose additional costs and impair flexibility needed for an orderly project operation.

As has been called to your attention, by others, there is a valuable opportunity in the development of this project to interconnect major market areas and other basin projects which would permit diversity of power relative to seasonal load demands, time zone differences, also watershed characteristics and conditions. It would be difficult to put a price tag on the value of taking advantage of these opportunities. It is obvious, however, that there is a tremendous value

that can be attained only through a system owned and operated by the same controller, the Secretary of the Interior.

Such advantages have been foreseen by Congress as is shown in section 7, Public Law 485, 84th Congress, stating as follows:

"The hydroelectric powerplants and the transmission lines authorized by this act to be constructed, operated, and maintained by the Secretary shall be operated in conjunction with other Federal powerplants, present and potential, so at to produce the greatest practicable amount of power, and energy that can be sold at firm power and energy rates."

SUMMARY

The Intermountain Consumer Power Association members urge that the Federal Government construct the entire transmission system that is required for the Colorado River storage project.

It is the unanimous opinion of the group that the Federal system will—

1. Bring a cheaper source of power to the ultimate users.
2. Establish within Utah a competitive condition which does not now exist.
3. Permit diversity of power between basin projects as well as between preference users of different areas.
4. Establish a single owner and controller of generation and transmission that will give maximum efficiency resulting in the greatest benefits and quickest possible money return to be used on participating projects.
5. Result in a marketing system that can be readily extended and interconnected with future projects.

The members of our association have been unimpressed with the "private utilities plan" because of its inadequacy in fulfilling the intent of Congress when they authorized the Colorado River project law 485. We believe that only a Federal transmission system can meet the principles set forth by the Bureau of Reclamation on January 19, 1960, which are as follows:

1. Lines must be of sufficient capacity to assure delivery of available power.
2. There must be no interference with the ability of the Bureau to serve preference customers to the extent they would be served by Federally constructed lines.
3. Backbone lines must provide suitable integration among Federal project power facilities at the time required to meet project objectives, and project use must at all times be the overriding consideration.
4. Charges made for delivery of power must not adversely affect project feasibility and payout, and particularly must be such as not to reduce quantity or timing of irrigation assistance.
5. If utilities construct the backbone high-voltage transmission lines, they must accept also the responsibility of providing transmission for delivery at lower voltages to load centers of preference customers to the same extent as would prevail under a federally constructed system.

CONCLUSION

We are mindful of the many responsibilities of this committee and the many problems and requests you receive. We are regardful of the importance of economic investing of public funds. This is also one of our responsibilities as public servants and we are in accord with your endeavors to invest only for the development of projects that are self-supporting.

We, therefore, urge your favorable consideration to the request of this association to appropriate at least $5 million to be made available for fiscal year 1961 to initiate orderly and efficient construction of the transmission lines running from the Flaming Gorge terminal station to Oak Creek, Colo., and from Glen Canyon to Farmington, N. Mex., thence to Poncha Junction via Curecanti.

The members of the Utah association recognize that for them to participate in the advantages of the Federal system it will be necessary also to start the balance of the transmission lines.

Therefore, we respectfully request this committee to direct the Bureau of Reclamation to proceed immediately with the necessary engineering studies, right-of-way acquisitions, and initial construction of the lines from Flaming Gorge to Provo, Utah; Provo to Glen Canyon; Flaming Gorge to Sinclair, Wyo.; Glen Canyon to Phoenix, Ariz.; and from Farmington to Albuquerque, N. Mex.

Delaying the development of the Colorado River storage project in this im-

portant aspect will further delay the realization of the return of the investment and the funds necessary for the development of present and future participating projects.

We thank you for your time and attention.

SALT RIVER PROJECT

STATEMENT OF LESLIE M. ALEXANDER, ASSISTANT GENERAL MANAGER, SALT RIVER POWER PROJECT OF ARIZONA

PREPARED STATEMENT

Mr. WILSON. Mr. Chairman, we have Mr. Leslie Alexander, of the Salt River power project of Arizona.

Mr. ALEXANDER. Mr. Chairman, I have a chart, and I wonder if I may talk from this position.

Chairman HAYDEN. Certainly.

Mr. ALEXANDER. Mr. Chairman and members of the committee, my name is Leslie M. Alexander. I am representing Victor Corbell, president of the Salt River project, Phoenix, Ariz.

These remarks are in the nature of an oral summary of Mr. Corbell's statement, which I respectfully request be filed with this committee.

Chairman HAYDEN. That will be done.

(The statement referred to follows:)

STATEMENT OF VICTOR I. CORBELL ON COLORADO RIVER STORAGE PROJECT

Mr. Chariman and members of the committee, my name is Victor I. Corbell. I very much appreciate the opportunity to appear before you today as president of the Salt River Valley Water Users' Association and the Salt River Project Agricultural, Improvement, and Power District. These two organizations are generally referred to as the Salt River project, which was begun over 50 years ago as the first multipurpose water and power development constructed under the Reclamation Act of 1902. The water users now operate and maintain our project under contract with the Bureau of Reclamation, to serve water to 250,000 acres and power to over 300,000 people in central Arizona.

We, as preference power users of the Colorado River Basin, are greatly interested in the early construction of an adequate and economic transmission system from Colorado River storage project powerplants into Arizona and into the other four States within the storage project area. The basic, guiding principles for providing this transmission system—principles with which we thoroughly agree—have been clearly stated by the Congress, and carried forward in the actions of the Secretary of the Interior and the Bureau of Reclamation.

Committee report, House Document No. 1087, 84th Congress, expresses these principles:

"* * * Therefore, the committee expects the proposal by the private power companies for cooperation in the development to be carefully considered by the Department of the Interior and the electric power and energy of the project to be marketed, so far as possible, through the facilities of the electric utilities operating in the area, *provided, of course, that the power preference laws are complied with and project repayment and consumer power rates are not adversely affected.*" [Emphasis added.]

These principles were enunciated by the Congress to promote the economic well-being and growth of the intermountain project area, without adverse effect on other portions of the United States. And they are principles which properly accord to those who are repaying over 90 percent of the cost of the gigantic storage project through the purchase of power, the consideration due them for undertaking such a responsibility for so long a time. The construction proposed by the utilities on October 1, 1959, does not meet these requirements of Congress.

MARKETING STORAGE PROJECT POWER

Storage project power in excess of the initial needs of preference consumers in Colorado, New Mexico, Utah, and Wyoming can be absorbed immediately, at firm prices, by Arizona preference customers, who are willing to release power to the Upper Basin in the future under an agreed to formula. The Salt River project has joined other preference consumers in the five-State area to form the Colorado River Basin Consumers Power, Inc., which has advised the Secretary of its agreement to such a marketing arrangement.

The utilities have not proposed, nor indicated an interest in building, a transmission system which will provide for delivery of power to preference customers in any such manner.

STORAGE PROJECT REPAYMENT

Preference consumers have joined together to seek, under existing law, all project power at firm rates as soon as it is available. The utilities operating in the area have joined in an offer to absorb project power but they have not said they are willing to pay firm prices. The preference consumers' offer, with adequate Bureau transmission capacity to deliver, could thus enhance project development and payout. If the alternative is sales to the utilities, at steam replacement costs, of all energy not used by preference consumers in the Upper Basin, the project could lose as much as $50 million in potential revenue.

Also, with Bureau construction, an amount equal to the amortization component of transmission system cost can be applied to water development after the original cost of the system has been recovered, without change in consumer power rates, to yield over the full construction and repayment period as much as $204 million.

Conversely, without change in consumer power rates, the Utilities' proposed combination system would reduce project repayment ability by $204 million.

CONSUMER POWER COSTS

Preference consumers need a greatly expanded supply of dependable low cost electricity, not only for irrigation pumping but also for municipal purposes—in order to maintain reasonable power rates and to produce revenues from electric sales to meet rising costs of rapidly expanding irrigation, domestic and industrial water uses, and other municipal services.

Our own Salt River project is a good example of this reclamation principle at work. Irrigation and domestic water charges have remained at reasonable levels in this area only by reason of increasing electric revenues contributed by the project's power operations—the true fruition of the multipurpose reclamation concept.

Salt River is proof that such projects do enhance the economy. The original Federal investment of some $10 million has been fully repaid. In addition, in the 25-year period 1934–59, residents of Maricopa County (80 percent of whom reside on Salt River project lands) have paid to the Federal Government taxes exceeding $1 billion, possible only because of the local economy created and maintained by the Salt River project.

We do not need nor want a transmission system which has for its purpose only the extension of the Federal Government in the power business. We do want the system which will make all storage project power available to preference customers at the lowest possible cost. The utilities have offered to provide a major part of the storage project transmission, but they have not come forth with wheeling charges they might apply. If they make these charges in accordance with usual ratemaking procedure, consumers power costs would be adversely affected—increased as much as $433 million over the Bureau costs for such service.

This is not all—if the utility combination system is built, the repayment ability of the project is dangerously reduced, as we noted earlier, by some $204 million. To keep the project whole then, could necessitate an increase in power rates, over Bureau charges, of $433 million plus $204 million equals $637 million, almost 1.3 mills per kilowatt-hour on all firm energy for 100 years. We understand this approach has actually been suggested by one of the utilities concerned.

The utilities will not be customers for storage project power. Thus they have no reason to build a transmission system to wheel power to preference customers, except to exercise control over the entire transmission network and to extract a profit from preference consumers for the benefit of nonresident share-

holders. Preference consumers are repaying some 90 percent of the whole cost of the storage project as first proposed by the Bureau—why should they be asked to pay needless additional charges?

There are further considerations. It is of vital importance that the Bureau's 1,200,000-kilowatt storage project system and its 1,700,000-kilowatt Hoover-Parker-Davis system be electrically interconnected by a Bureau-controlled backbone transmission system. This backbone is essential to preserve the best combination of water levels to minimize power deficiencies to all concerned. Such an interconnection to be constructed, operated, and maintained by the Secretary of the Interior, was ordered and authorized by Public Law 485, 84th Congress, 2d session. That interconnection can be enlarged to provide capacity for marketing storage project power in the Phoenix area of Arizona.

Finally, there will be increasing permanent use for these transmission lines in capacity interchange between Arizona and the systems to the north. An increasing percentage of Arizona's generating capacity is becoming idle in the winter, while a greater summertime surplus is growing in the other States. The ultimate power users, both preference and utility customers, would materially benefit by interchanging this diversity, especially at Bureau wheeling rates, and the added revenue could accelerate project payout. Preference customer diversity interchange alone will provide revenues to the Bureau of from $60 million to $100 million. These revenues will be denied the Federal Government if the utility system is built.

SUMMARY

The Salt River project and other Arizona preference users have a major interest in securing power from the storage project, and a vital stake in obtaining that power at the lowest possible cost. The Congress has directed that, in marketing this power, preference laws must be complied with, and project repayment and consumer power rates be not adversely affected.

Bureau of Reclamation rates for an all Federal system will be set at a level sufficient to pay out power features and other obligations of power revenues within specified times—in fact, power revenues will pay 91 percent of the total cost of this tremendous water and power project. The utilities offer will—

(*a*) Decrease power revenues and adversely affect project repayment ability up to—

(1) $50 million—utility power purchases at less than firm rates; and

(2) $204 million—Bureau payment of wheeling charges over what it can afford.

(*b*) Increase consumers' power costs over Bureau charges by $433 million.

(*c*) Decrease the Government's investment by some $90 million.

The project cannot stand decreased revenues so the utilities have spoken of an alternative:

(*a*) Adding the $204 million project repayment deficit under its plan to consumer power costs; and

(*b*) Increasing consumer power costs over Bureau charges by $433 million plus $204 million, or $637 million. Because preference customers buy all the power, they pay all of the increased costs—1.3 mills per kilowatt-hour added to all firm energy for 100 years.

And, in addition, the Government would be denied revenues from diversity wheeling essentially equal to the investment the utilities offer to save the Government—an investment to reap the benefits from the Government's $1 billion project.

A decision in this session of Congress is essential, since any further delay will not provide sufficient time for planning and construction. We therefore respectfully urge this committee to—

1. Take action to secure the appropriation of $5 million in fiscal year 1961 to start construction of the Flaming Gorge-Oak Creek and Glen Canyon-Farmington-Curecanti lines, which the utilities agree should be constructed by the Bureau of Reclamation.

2. Instruct the Secretary of the Interior and the Bureau of Reclamation to—

(*a*) Begin the construction of above lines.

(*b*) Proceed in fiscal year 1961 with plans, right-of-way acquisition, surveys and designs for the lines to Phoenix, to Farmington-Albuquerque and to Provo-Vernal, all from Glen Canyon, and from Flaming Gorge to Sinclair, Wyo.

(c) Program and budget future line construction in orderly manner and as required to insure that facilities will be in service in time to deliver power to the market when powerplants are complete.

3. Suggest early determination by the Secretary of the marketing area and the price of power.

Thank you.

GENERAL STATEMENT

Mr. ALEXANDER. Our project, as a major multipurpose reclamation project, is a preference power user in the Colorado River Basin. We are interested in the early construction of an adequate and economic transmission system from Colorado River storage project powerplants into Arizona and the other four States within the storage project area.

We also have a vital stake in obtaining storage project power at the lowest possible cost.

Mr. Corbell's summary statement states in part:

The Congress has directed that, in marketing storage project power, preference laws must be complied with, and project repayment and consumer power rates must not be adversely affected.

We believe these standards can only be met by the type of Federal transmission system Mr. McPhail, our representative from the Kuljian Corp., has set out for you earlier today. Such a system was authorized by the Congress under Public Law 485.

The Bureau of Reclamation rates for such an all-Federal system will be at a level sufficient to pay out power features and other obligations of power revenues within specified times, in fact power revenue will pay 91 percent of the total cost of this tremendous water and power project.

ADVERSE EFFECT OF COUNTER OFFER

We have prepared a chart to demonstrate the adverse effect the utilities' counter offer of a combination private and Federal transmission system will have on project repayment and consumers' power rates.

This chart, which has a scale of a hundred of millions of dollars on the left, and the various graphs drawn to that scale, indicates in the left-hand graph the total irrigation assistance required to pay out this project, which an all Federal powerplant and transmission system will do at 6 mills per kilowatt-hour—delivered. The irrigation assistance required is over $1 billion.

Now, the combination system, as shown by the middle graph, is one which will do about the same transmission job as the all-Federal system—we have increased the utilities' estimate, from the $90 million or so they had in their combination plan, enough to provide sufficient utility transmission capacity into Arizona.

So that the total combination system investment approximates the Bureau system, investment, and the total transmission job the combination system would do approximates the capability of an all-Federal system.

If the total delivered charges to the consumer remain at the 6 mills per kilowatt-hour level, then under such a system, utility wheeling reduce required project irrigation assistance by $637 million. Natu-

rally water projects have to be sliced more than in half—as the middle graph shows.

RESTORATION OF FUNDS ASKED

Now, of course this required irrigation assistance can be restored by charging a rate for power, through the combination system, sufficient to pay the utilities' wheeling charges and restore to the project the billion dollars required for irrigation assistance. But what happens can be seen in the right-hand graph.

Consumers pay the extra amount. The $637 million, or about 1.3 mills per kilowatt-hour for every wheeled kilowatt-hour for the 100 years of the study.

We can conclude from this chart that if utility wheeling charges are set at levels commensurate with the utilities' full cost of providing such service, their proposal will in effect be saving the Federal Government a $90 million investment at the expense of power consumers who will pay $637 million more for storage project power.

Even if utility wheeling charges are cut in half, power consumers will still pay $119 million more for their power than they would from an all-Federal system.

UTILITIES' OFFER TO WHEEL POWER

A spokesman for the utilities made an offer yesterday to the House Subcommittee on Appropriations to wheel power over the Utah Power & Light Co. system for 1.55 mills per kilowatt-hour at 138,000-volt delivery. This company's proposed charge actually turns out to be nearer 1.85 mills per kilowatt-hour when measured against Bureau of Reclamation charges for such services.

Step-down substation costs are included in power investments made by the Bureau. With Bureau rates thus reflecting costs of making delivery of power at customer's voltage, it is proper for them to offer the customer a discount if he takes delivery at transmission voltages.

The Utah companies' offer of a wheeling rate of 1.55 mills per kilowatt-hour at transmission voltage must be increased to reflect the investment of a step-down substation. Its wheeling rate proposal can then be properly compared with Bureau charges for similar service.

PENALTY PAYMENT

Referring again to the chart, this means that if all the utility charges are at this level, power customers of the storage project will be paying about 1 mill per kilowatt-hour penalty on every wheeled kilowatt-hour for a hundred hours. Preference customers, then, being purchasers of the power will have their rates adversely affected to the tune of about $500 million under the 1.55 mill per kilowatt-hour offer.

The committees of Congress have said it was not their intention that consumer power rates should be so adversely affected.

Mr. Corbell's statement further says of the utilities' proposal:

> In addition, the Government would be denied revenues from diversity wheeling essentially equal to the investment the utilities offer to save the Government—

An investment they hope to make to reap the benefits from the Government's billion dollar project.

Gentlemen, there has been much said about all of the taxpayers in the country paying for such a project as the Colorado River storage project. Let me point out how they really benefit rather than pay in net effect.

Our own Salt River project is a good example of this reclamation principle at work. The original Federal investment of some $10 million has been fully repaid. In addition, in the 25-year period from 1934 to 1959, residents of Maricopa County, 80 percent of whom reside on Salt River project lands, have paid to the Federal Government taxes exceeding $1 billion, a return on Government investment of over 10,000 percent, possibly only because of the local economy created and maintained by the Salt River project.

Gentlemen, we believe a decision during this session of Congress is essential, since any further delay will not provide sufficient time for planning and construction.

REQUESTS FOR SPECIFIC COMMITTEE ACTION

We therefore respectfully request this committee to do these things:

First, take action to secure the appropriation of $5 million in fiscal year 1961 to start construction of the Flaming Gorge to Oak Creek and the Glen Canyon-Farmington-Curecanti lines, which all agree should be constructed by the Bureau of Reclamation;

Two, instruct the Secretary of the Interior and the Bureau of Reclamation to proceed in fiscal year 1961 with plans, rights-of-way acquisition, surveys and designs for the lines to Phoenix, to Farmington-Albuquerque and to Provo-Vernal, all from Glen Canyon, and from Flaming Gorge to Sinclair, Wyo.;

Next, to program and budget future line construction in an orderly manner and as required to insure that facilities will be in service in time to deliver power to the market when powerplants are complete;

And finally, to make early determination of the marketing area and the price for power, and to announce same.

This is especially important to Arizona, since the utilities' proposal does not include Arizona.

I thank you very much.

Senator BIBLE. May I ask the witness just one question?

Mr. ALEXANDER. Yes, sir.

BASIS FOR STUDY

Senator BIBLE. I am interested in the study you show, Mr. Alexander, why you used 100 years as the basis of your study?

You may show that in Mr. Victor Corbell's prepared statement, but I don't think you covered that. Why do you use a hundred years?

Mr. ALEXANDER. This is considered to be the length of the payout period of the total project.

Senator BIBLE. By whom?

Mr. ALEXANDER. By the Bureau.

Senator BIBLE. This is the standard they use as the full payout period for the entire project; is that correct?

Mr. ALEXANDER. That is right, considering 50 years. As an allowable payout period for each participating project and considering

that the last one of these will not be due to start repayment until 50 years after the first power project is completed.

Senator BIBLE. Thank you.

Mr. WILSON. And I believe that completes our testimony. And thank you very much for your kindness and patience and time here this morning.

Chairman HAYDEN. Senator Moss.

Senator Moss. I just dropped in to listen.

OPPOSITION TO PROPOSED TRANSMISSION LINE CONSTRUCTION

STATEMENT OF V. G. PEARSON, BUSINESS MANAGER, LOCAL UNION 57, INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS, SALT LAKE CITY, UTAH

GENERAL STATEMENT

Mr. PEARSON. Mr. Chairman and members of the committee, my name is V. G. Pearson. My address is 1743 West North Temple Street, Salt Lake City, Utah.

I am business manager of Local Union 57, International Brotherhood of Electrical Workers, and represent 1,800 taxpaying union members in Utah, Idaho, and Colorado.

I am generally familiar with the existing transmission lines and the proposed construction of transmission lines by private companies and the Bureau of Reclamation in the State of Utah. I know, of my own knowledge, that there is not now a shortage of line capacity, and that there will not be any shortage.

We have supported the Colorado River storage project from its conception, and urge the appropriation of construction funds for all phases of the project and participating projects except the transmission division.

I appear before this honorable subcommittee solidly in opposition to funds being appropriated for the transmission division of the Colorado River storage project for planning, surveying, or constructing transmission lines. Because of the limited time allotted to me, I will make my statements very brief.

DUPLICATION OF PRIVATE LINES

These lines, if built by the Federal Government, will duplicate lines of the private electric utilities in the area. We are firmly against the Federal Government becoming an electric utility. If the Federal Government is going to continue to produce and deliver power to preference customers, it will tend to foster more of them.

At the present time there is a movement being fostered in the State of Utah to encourage all cities to convert to municipal-owned power systems, to make sure that all power from Glen Canyon and Flaming Gorge will be delivered under the preference clause. If this is accomplished, it will be a death blow to our membership because, in an opinion given by the attorney general of the State of Utah, it is unlawful for public officials to negotiate wages and working conditions with labor unions.

LOW WAGES

At the present time wages and working conditions of electric utility employees employed by public bodies and cooperatives in the State of Utah and adjoining States are deplorably low. In a few isolated instances where they have been affected by union organization, conditions have been improved.

However, wage levels and working conditions are far below those which exist in private industry, and it is our considered opinion that the construction of these lines by the Bureau of Reclamation will encourage further establishment of electric distribution systems by more and more cities and towns with the result, so far as we are concerned, of the establishment of more and more areas with low wages and poor working conditions. We plead with you not to force these conditions upon us.

We believe the Federal Government should avoid construction of transmission lines wherever possible and certainly should not duplicate the lines of private companies that are available for marketing project power.

I thank you.

Senator BIBLE. Mr. Chairman, may I just ask one question?

I am rather surprised at this statement that the wages and working conditions of the electric utility employees employed by public bodies are deplorably low.

Can you give us some examples of this for the record? I mean as to how they compare with the wages of employees that are employed by the private utility, if I understand your position?

COMPARISON OF WAGES

Mr. PEARSON. We have found in the State of Utah——

Senator BIBLE. This is something of a surprise to me. It is something that I did not know about.

Mr. PEARSON (continuing). That the employees there will make an average of a hundred dollars less a month.

Senator BIBLE. Doing comparable work?

Mr. PEARSON. Yes. In some areas they have been trying, as I said, to make the pay per hour equivalent, but when we consider other fringe benefits such as pensions, insurance, and so on, they are still considerably lower.

Senator BIBLE. Do you have a study or table?

Mr. PEARSON. I don't have one with me, but I would be glad to furnish it.

Senator BIBLE. That is a surprising statement to me, and I would like to have you develop it for the record.

Chairman HAYDEN. You may do so if you desire.

Mr. PEARSON. I will look one up and send it back when I get it.

LETTER FROM SENATOR MOSS

(NOTE.—The following letter was received prior to printing and is included at this point in the record at the direction of the chairman.)

U.S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
April 27, 1960.

HON. CARL HAYDEN,
Chairman, Interior Subcommittee, Senate Appropriations Committee, Washington, D.C.

DEAR CARL: Enclosed is a letter from E. J. Ballard, Jr., general manager of the Moon Lake Electric Association in Vernal, Utah, and a compilation of the wage scale and fringe benefits received by employees of that association.

Will you please make them both a part of the record of the hearings. I will also appreciate it if you will call them to the attention of the members of the committee.

Sincerely,

FRANK E. MOSS.

MOON LAKE ELECTRIC ASSOCIATION, INC.,
Vernal, Utah, April 20, 1960.

HON. FRANK E. MOSS,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MOSS: In connection with the Senate hearing of the Interior Subcommittee on Tuesday, April 12, 1960, concerning appropriations for the construction of transmission lines in Utah, we ask if we might provide our wage scale and fringe benefits to be put into the record. It was stated in the meeting by the public utilities that the cooperative and municipal pay scales were $100 lower on an average than a union scale. It was also stated that the cooperatives and municipals had no fringe benefits.

Enclosed is a sheet listing our wage scale and fringe benefits, which will confute these charges. We appreciate your interest in our affairs.

Very truly yours,

E. J. BALLARD, Jr., *General Manager.*

Moon Lake Electric Association

	Salary
General manager	$850.00
Serviceman and lineman	435.00
Line superintendent	550.00
Groundman-construction helper	304.50
Controller	550.00
Administrative assistant	550.00
Apprentice serviceman	348.00
Power use	525.00
Accountants	417.00
Accounts receivable clerk	365.00
Billing clerk	330.00
Custodian	300.00
Cashier	330.00
Diesel operator	435.00
Apprentice	382.00
Senior	452.00
Extra help	304.50

In addition to the above salary schedule, each employee receives an additional 21 percent of his salary in fringe benefits, not including benefits required by law, such as workmen's compensation:

	Percent
(1) Retirement (after 3 years)	7.5
(2) Vacation and holidays	6.9
(3) Sick leave and hospitalization insurance	6.7

SALT RIVER PROJECT AGRICULTURAL IMPROVEMENT & POWER DISTRICT

Chairman HAYDEN. A resolution of the board of directors of the Salt River Project Agricultural Improvement & Power District will be included in the record.

(The resolution referred to follows:)

RESOLUTION

Whereas the Congress of United States is considering the appropriation of funds to continue construction of Colorado River storage project powerplants and transmission system; and

Whereas both the Upper Colorado River Commission and preference customers in the upper division States of Colorado, New Mexico, Utah, and Wyoming have advised the Secretary of the Interior that storage project power should also be sold to preference customers in Arizona; and

Whereas the Salt River project is a Federal reclamation project located in central Arizona within reasonable and economic transmission distance from Glen Canyon powerplant, the major power producing unit in the storage project; and

Whereas the Salt River project is entitled to preference in the sale of power from the storage project; and

Whereas the Salt River project desires to purchase substantial amounts of the electric power and energy to be generated by said storage project; and

Whereas preference customers in the upper division States and in Arizona jointly agree that backbone interconnecting and marketing transmission lines to major load centers in the market area must be constructed and operated by the Bureau of Reclamation; and

Whereas the interests of the United States, the States in the Upper and Lower Basin of the Colorado River, the storage project power customers, and the Salt River project will be best served if such transmission lines are constructed and operated by the Bureau of Reclamation; and

Whereas congressional authorization for construction and operation of backbone transmission lines to interconnect Federal powerplants on the Colorado River system was provided for in section 7, Public Law 485, 84th Congress, 2d session; and

Whereas the $7,700,000 for fiscal year 1961 for the project transmission system construction shown in Senate Document No. 101, 85th Congress, 2d session, has now been reduced to $518,000, indicating that the construction may be seriously behind schedule: Now therefore, be it

Resolved, That this board request that the Arizona delegation to the Congress of the United States urge Congress to direct the Secretary of the Interior and the Bureau of Reclamation to construct the backbone transmission lines connecting Colorado River generating plants in the upper and lower basin, and, additionally, the lines needed for delivery of Colorado River storage project power to preference load centers; be it further

Resolved, That said delegation be requested to urge the Congress to appropriate funds to accomplish these purposes in such amounts and at such times as will be required for an orderly transmission system construction program.

CERTIFICATE

I, A. L. Monette, the duly appointed, qualified, and acting secretary of the Salt River Project Agricultural Improvement & Power District, hereby certify that the foregoing is a true, correct, and complete copy of a resolution adopted by the board of directors of said district at a special meeting thereof duly held on the 4th day of April 1960, at which said meeting a quorum was present and voted.

Witness my hand and seal of Salt River Project Agricultural Improvement & Power District this 6th day of April 1960.

[SEAL] A. L. MONETTE, *Secretary.*

SALT RIVER VALLEY WATER USERS' ASSOCIATION

Chairman HAYDEN. A resolution of the board of governors of the Salt River Valley Water Users' Association will be included in the record.

(The resolution referred to follows:)

RESOLUTION

Whereas the Congress of the United States is considering the appropriation of funds to continue construction of Colorado River storage project powerplants and transmission system; and

Whereas both the Upper Colorado River Commission and preference customers in the upper division States of Colorado, New Mexico, Utah, and Wyoming have advised the Secretary of the Interior that storage project power should also be sold to preference customers in Arizona; and

Whereas the Salt River project is a Federal reclamation project located in central Arizona within reasonable and economic transmission distance from Glen Canyon powerplant, the major power producing unit in the storage project; and

Whereas the Salt River project is entitled to preference in the sale of power from the storage project; and

Whereas the Salt River project desires to purchase substantial amounts of the electric power and energy to be generated by said storage project; and

Whereas preference customers in the upper division States and in Arizona jointly agree that backbone interconnecting and marketing transmission lines to major load centers in the market area must be constructed and operated by the Bureau of Reclamation; and

Whereas the interests of the United States, the States in the upper and lower basin of the Colorado River, the storage project power customers, and the Salt River project, will be best served if such transmission lines are constructed and operated by the Bureau of Reclamation; and

Whereas congressional authorization for construction and operation of backbone transmission lines to interconnect Federal powerplants on the Colorado River system was provided for in section 7, Public Law 485, 84th Congress, 2d session; and

Whereas the $7,700,000 for fiscal year 1961 for the project transmission system construction shown in Senate Document No. 101, 85th Congress, 2d session, has now been reduced to $518,000, indicating that the construction may be seriously behind schedule: Now, therefore, be it

Resolved, That this board request that the Arizona delegation to the Congress of the United States urge Congress to direct the Secretary of the Interior and the Bureau of Reclamation to construct the backbone transmission lines connecting Colorado River generating plants in the upper and lower basin, and additionally, the lines needed for delivery of Colorado River storage project power to preference load centers; and be it further

Resolved, That said delegation be requested to urge the Congress to appropriate funds to accomplish these purposes in such amounts and at such times as will be required for an orderly transmission system construction program.

CERTIFICATE

I, J. F. Griswold, the duly appointed, qualified, and acting secretary of Salt River Valley Water Users' Association, hereby certify that the attached is a true, correct, and complete copy of a resolution unanimously adopted by the board of governors of said association at a regular meeting thereof duly and regularly held on the 4th day of April 1960, at which said meeting a quorum was present and voted.

Witness my hand and seal of Salt River Valley Water Users' Association, this 6th day of April 1960.

[SEAL] J. F. GRISWOLD, *Secretary.*

COLORADO POWER AND WATER

STATEMENTS OF A. J. SHAVER, CHIEF ENGINEER, COLORADO RIVER COMMISSION, AND JOHN W. BONNER, SPECIAL ASSISTANT ATTORNEY GENERAL, STATE OF NEVADA

PREPARED STATEMENT

Senator BIBLE. I have no further questions.

Mr. Chairman, I am very happy to introduce the two witnesses from Nevada.

Mr. A. J. Shaver is the chief engineer of the Colorado River Commission of Nevada, and Mr. John Bonner is the deputy attorney general of the State of Nevada, attached to the Colorado commis-

sion as its special counsel. And they have a special presentation to make at this time.

They have advised me that it will take about 5 minutes instead of 10. And I am grateful to you for scheduling them.

Mr. BONNER. Mr. Chairman, we would like very briefly to make an oral statement in addition to our written statement, which has been filed with the clerk.

(The statement referred to follows:)

STATEMENT OF COLORADO RIVER COMMISSION

To the Honorable Public Works Subcommittee of the Senate Appropriations Committee:

Comes now the State of Nevada through its Colorado River Commission represented by A. J. Shaver, chief engineer, and John W. Bonner, special assistant attorney general, and respectfully represent as follows, to wit:

I. That the Colorado River Commission of the State of Nevada is legally authorized to represent the State in all matters of power and water pertaining to the Colorado River.

II. That we support the budget request submitted and respectfully urge that in planning the transmission lines a study be made of the feasibility of a transmission line connecting the Glen Canyon and Hoover powerplants. Such a line would be in conformity with section 7 of the Colorado River storage project which provides for interconnection of Federal powerplants. This line (approximately 200 miles long) could be routed near the Bridge Canyon Dam site. It is almost certain that the rapidly expanding power market of the Southwestern United States will require the construction of Bridge Canyon Dam and powerplant within a few years. The output of that plant could then be connected to that of other Colorado River plants without the expense of additional transmission lines.

III. Section 7 of the Colorado River Storage Project Act provides that the hydroelectric power plants and transmission lines authorized by said act to be constructed, operated, and maintained by the Secretary shall be operated in conjunction with other Federal powerplants, present and potential, so as to produce the greatest practicable amount of power and energy that can be sold at firm power and energy rates.

IV. During a recent conference between members of said Commission, both Nevada Senators, and the Interior Department, it was divulged that substantially all of the power which may be allotted to Arizona and Nevada from the Glen Canyon project will be generated at the Hoover powerplant, although it will be considered as Glen Canyon power. The transmission line which we now propose would provide for peaking, standby, additional, and reserve power available at all times to support the Hoover powerplant. The Hoover powerplant is a main power center for the distribution of Colorado River energy to preference customers in Nevada, Arizona, and California.

V. We further respectfully urge this committee to consider the report of the Senate committee relative to the Colorado River Storage Project Act wherein it was stated that there would be no discrimination in the delivery and use of the power to be generated under said act by the upper basin States and the lower basin States.

VI. Proposals of other groups concerning transmission lines from Glen Canyon powerplant have not given full consideration to the most economical means of interconnecting Federal powerplants along the river because of their disregard of future connection to Bridge Canyon powerplant.

COLORADO RIVER COMMISSION
OF NEVADA,
By A. J. SHAVER,
Chief Engineer.
By JOHN W. BONNER,
Special Assistant Attorney General.

GENERAL STATEMENT

Mr. BONNER. Briefly, Mr. Chairman, we are here in support of the requested appropriation for a further study of the transmission lines to be constructed by the Government, and in that respect we urge this committee to request the Bureau of Reclamation in the study to consider the feasibility of a transmission line to be constructed by the Government directly from Glen Canyon to Hoover Dam, which would also connect the proposed Marble Canyon and Bridge Canyon Dam, such a line.

And we believe, Mr. Chairman, that——

Senator BIBLE. I ask at that point how long this line is.

Mr. BONNER. It is 200 miles, Senator, 200 miles long.

And yesterday, before the House committee, as I understand, Mr. McPhail, for the upper basin preference group, said that they also recommended that a line be constructed to the proposed Marble Canyon site, and if that is true, if such a line were constructed from Glen Canyon to Marble Canyon, it would only require an additional 100 miles from the Marble-Bridge Canyon site to Hoover, which would cost approximately $6 million additional.

I will ask Mr. Shaver, our chief engineer, to take over from here.

SUMMARY OF STATEMENT

Mr. SHAVER. Mr. Chairman and Senator Bible and other gentlemen of the committee, I am A. J. Shaver, chief engineer of the Colorado River Commission of Nevada. And in a very brief statement I would like to sum up the filed document.

We are here today representing the sovereign State of Nevada as its Colorado River Commission. The Governor of the State, by virtue of the legislative enactment, is the chairman of this commission. We speak, therefore, for the State and the Commission, which commission is "charged and empowered to receive, protect, and safeguard and hold in trust for the State of Nevada all water and water rights and all other rights, interests, or benefits, in and to the waters of Colorado River, and to the power generated thereon."

Our position as to the allocation of power to Nevada from Glen Canyon powerplant has previously been stated in a conference with our U.S. Senators, the Governor, and members of the Columbia River Basin, in meeting with Assistant Secretary Aandahl, Under Secretary Bennett, and others on March 23, 1960, and reaffirmed by letter to Secretary Seaton under date of April 1, 1960, signed by Gov. Grant Sawyer. It is not intended that we discuss this particular subject before your honorable committee.

We are here today to urge consideration by your committee of requests for funds for continuance of studies of the transmission grid system by the Bureau of Reclamation, and particularly to emphasize the desirability of the inclusion in these studies of a review of the complete grid system to coordinate and integrate the operation of all Federal projects on the Colorado River, both present and potential, as directed by section VII of Public Law 485.

At the hearings on S. 500, Public Law 485, the committee stated that the area to be served shall be governed only by the economic

transmission assistance either direct or through interconnection with other plants either in the upper or lower basin.

We urge, therefore, that these funds be made available to enable the Bureau of Reclamation to make these studies without interruption, looking toward the full development of our resources on the Colorado River and the transmission thereof to all areas of the basin.

Gentlemen, we thank you.

Chairman HAYDEN. Thank you, sir.

Mr. BONNER. Thank you, Mr. Chairman, and Senator Bible, for allowing us to appear.

Chairman HAYDEN. Mr. Stringham?

(No response.)

Chairman HAYDEN. Mr. Stringham is not in the room. He will be scheduled at a later date.

COMMITTEE RECESS

Chairman HAYDEN. That concludes the hearing this morning. We will recess until 10 o'clock tomorrow morning.

(Whereupon, at 11 a.m., Tuesday, April 12, 1960, the subcommittee recessed, to reconvene at 10 a.m. Wednesday, April 13, 1960.)

PUBLIC WORKS APPROPRIATIONS FOR 1961

WEDNESDAY, APRIL 13, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Chairman Hayden and Senator Dworshak.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

STATEMENT OF CLYDE ELLIS

GENERAL STATEMENT

Chairman HAYDEN. The committee will be in order.

The first witness is Mr. Clyde Ellis.

Mr. ELLIS. My name is Clyde T. Ellis, general manager of the National Rural Electric Cooperative Association.

Mr. Chairman, if agreeable with you, I shall say a few words and present our electrical engineer, Charlie Robinson, who will make the principal statement for the organization.

Chairman HAYDEN. That may be done.

Mr. ELLIS. We are pleased, of course, to come again before this great committee which has done so much for the development of the water resources and other resources of the United States. We are concerned that the program is not moving ahead as rapidly as we would like to see it in many areas, our prime interest being electric power.

SCARCITY OF POWER

With the rural electric systems doubling their use of power about every 4 to 5 years, we are having great difficulty finding enough power, and in many sections of the country today we don't have enough power, and we are having to decline to serve uses which people would like to have served.

This tends to hold down the whole economy of the Nation in many areas where the rural electric systems are dependent upon the Federal hydroelectric power. The are either out or they are facing the prospect of no additional power within the next few years or within the time they will need it.

It was my privilege, Senator, to be with a Senate group last fall for 31 days looking over the hydroelectric facilities of the Soviet Union. We were amazed to see that apparently they are expending all efforts to utilize the full water resource, whatever it is. They told us, and we believe this is the U.S. experience, that hydroelectric power is cheaper than other sources of power, that they intend to maintain their ratio of hydroelectric power at about 20 percent hydro and 80 percent thermal. That happens to be about our ratio today in the United States.

However, they are planning to maintain their ratio, whereas our ratio of hydro is certain to go down because of the no-new-start policy in the last several years.

COMPARISON OF RUSSIAN AND UNITED STATES TECHNIQUES

The Russians have developed techniques of building that our engineers, including Harvey McPhail, whom you know, thought were probably substantially more efficient than some of the techniques used in this country. The present form cement block method, where they move the blocks in very rapidly and build the projects very rapidly, is roughly three-fifths the time in the United States and three-fifths the cost, they claim.

They are producing all of their electric power in Russia in joined producing grids, first into five grids, and they plan to superimpose larger transmission lines and tie the whole thing together through Russia. And we saw lines in operation operating 400,000 volts and soon to be stepped up to 500,000 volts, substantially in excess of anything we have in this country, and they have lines under tests if 800,000 to a million volts, with decreasing line loss in the larger voltages.

Chairman HAYDEN. As the voltage goes up the losses decrease?

Mr. ELLIS. Right.

So we are hoping that the powers that be in the United States will now take a new look at the possibilities of stepping up our development and tying together all these projects. There is great need at the moment to tie together the projects of the West into a more efficient setup.

STUDY OF FACILITIES IN WESTERN EUROPE

We had a study group in Western Europe this fall of the rural electric leaders who found that the electric power facilities of Western Europe are now generally tied into one big grid, countries interconnecting with countries, 400,000-volt lines, larger than in the United States, crossing the countries of Western Europe. This is an efficiency which we believe we must look forward to and achieve as rapidly as possible in the United States.

Charlie Robinson, who has been before you many times, is a graduate electric engineer, and has been with NRICA 10 years, and I am happy to defer now to him to present our principal statement.

Chairman HAYDEN. We will be glad to hear him.

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

STATEMENT OF CHARLES ROBINSON, STAFF ENGINEER

PREPARED STATEMENT

Mr. ROBINSON. Thank you, Mr. Chairman.

I am Charlie Robinson, the staff engineer of the National Rural Electric Cooperative Association.

In accordance with the instructions of the chairman, we have prepared a written statement which we ask be made a part of the record, except for the map which is attached to the back of it. That need not, I think, be made a part of the record, and probably would involve unnecessary printing expense.

Chairman HAYDEN. That may be done.

(The statement referred to follows:)

STATEMENT OF NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. Chairman and gentlemen of the committee, my name is Charles A. Robinson, Jr. I am the staff engineer of the National Rural Electric Cooperative Association which is the national service organization of which some 925 REA-financed rural electric systems are members.

Over 450 of these systems now purchase all or a portion of their wholesale power requirements from Federal power marketing agencies, the appropriations for most of which are controlled by this subcommittee. During fiscal 1958 (the latest year for which published figures are available) the rural electric systems purchased 9.1 billion kilowatt-hours of wholesale energy from Federal power marketing agencies to which they paid $45 million. This represented, during that year, approximately 40 percent of total wholesale energy input to all rural electric systems. A similar quantity of wholesale energy, 9.1 billion kilowatt-hours was purchased during the same year by rural electric systems from investor owned utility companies at a total cost of $72.5 million. The remaining 20 percent of system power requirements was obtained from local public agencies and REA-financed generating plants.

These figures convincingly disclose the fact that, on the average, our members are able to purchase from the Federal Government 60 percent more wholesale energy per dollar spent than they are from investor-owned utility companies. In addition to these direct savings, which amount to some $27.5 million per year, must be added the indirect benefits which arise from the competitive effect on the wholesale power market of the Federal power program.

Moreover, the total energy sales of rural electric systems are continuing to increase very rapidly. Figures released by REA on January 11 of this year, show that between 1958 and 1959 total energy sales increased 15.5 percent. This means our loads are continuing to double each 4 to 5 years. Compared to the fact that the loads of the electric industry of the United States as a whole are doubling every 7 to 10 years, these figures indicate why some of our members are experiencing difficulty in locating the supplies of energy they will require in future years at rates which they can afford to pay. Our interest in the Federal power program is vital. This is the reason for our appearance before this subcommittee each year to urge favorable consideration of appropriations for the Federal power construction and marketing agencies upon which our people so heavily depend.

This year, we are, in general, supporting the appropriations requests for Federal power marketing agencies submitted by the Bureau of the Budget. We do wish, however, to emphasize a few of the items which are of special importance to our members and to more fully explain the one request which is not a budgeted item.

NEW STARTS

Of the several Bureau of Reclamation water resource projects recommended by the Bureau of the Budget for new starts during fiscal 1961, two contain substantial hydroelectric power features and are of special interest to our membership. These are—

1. *Yellowtail unit, Montana.*—A 200,000-kilowatt project authorized for Bureau of Reclamation construction in southeastern Montana. Power from Yellowtail would be marketed by the Bureau's Missouri River Basin transmission system to rural electric systems and other preference customers connected to the eastern division of that system where Federal power is scarce and more is badly needed. In addition, the transmission lines which would be constructed to interconnect Yellowtail with the existing system would provide the first major tieline between the Bureau's eastern and western division systems, thereby adding, through system diversity, additional firm power to the Federal system.

The National Rural Electric Cooperative Association has recommended construction of Yellowtail unit for several years. Its total estimated cost is $107,491,129 of which the Bureau of the Budget has requested $2.5 million to begin construction in 1961. We ask that the full recommended amount be approved by the subcommittee.

2. *The Curecanti unit, Colorado.*—A 100,000-kilowatt powerplant authorized as part of the Colorado River storage project. The total cost of the Curecanti unit is estimated at $72.5 million of which $1,863,626 has been requested by the Bureau of the Budget to begin construction in fiscal 1961. Curecanti is the only power producing unit of the Colorado River storage project actually located in Colorado. Seventeen rural electric systems in Colorado depend upon the Bureau of Reclamation for their wholesale power supply and are most anxious that construction of Curecanti be completed as soon as possible so that the Federal system will be in a position to meet their anticipated load growth. We ask that the full budget amount be allowed for this item.

TRANSMISSION

1. *Iowa transmission lines.*—Last year, Congress, at the request of the rural electric systems and municipal electric systems of Iowa, appropriated some $800,000 to initiate construction of Federal transmission lines necessary to bring Missouri River Basin power to preference customers in Iowa. These funds were appropriated last year despite administration recommendations to the contrary. For this we are deeply grateful to this subcommittee and to the Congress. We are informed that the Bureau is faithfully carrying out the mandate of Congress and that work, within the limitations of the appropriated funds, is being carried out effectively and on the anticipated time schedule.

During the hearings a year ago, the investor-owned utility companies of Iowa appeared before this subcommittee in opposition to the construction of Federal transmission lines in that State. It is our information that these same companies are scheduled to appear again this year to renew that opposition. We assume that the opposition of the companies will be based upon a renewal of their plea that they be allowed to wheel Federal power to preference customers in Iowa over investor-owned company transmission facilities.

In this connection, may we point out to the subcommittee that these companies were given full opportunity to present their case for wheeling last year. The testimony at the end of last year's hearings clearly and convincingly showed that a Federal transmission system in Iowa is feasible and will afford to the preference customers of that State far greater benefits than would the wheeling proposal of the investor-owned companies. It appears to us that the decision of Congress last year to proceed with construction of Federal transmission facilities in Iowa constitutes a declaration of congressional intent that the rural electric systems and other preference customers in Iowa are entitled to the maximum benefits available from Federal power installations consistent with sound feasibility standards. We believe that once the Congress has reached a decision between wheeling contracts on one hand and Federal transmission on the other that decision should stand. To reconsider each year the same issues between the same parties can serve no purpose other than to create confusion.

We, therefore, urgently request that the full budget request of some $3 million be allowed for continuing construction on Federal transmission lines in Iowa.

2. *Colorado River storage project transmission facilities.*—The rural electric cooperatives and other preference customers in the States of Wyoming, Colorado, New Mexico, Utah, and Arizona have organized a nonprofit corporation, Colorado River Basin Consumers Power, Inc., for the purpose of having prepared a report on the transmission facilities necessary to best deliver Colorado River storage project power in accordance with law, and for the purpose of negotiating with

the Bureau of Reclamation for the purchase of such power and its allocation among the preference customers of the basin States.

To date the Bureau of Reclamation has expended $1.2 million on preliminary investigations of transmission facilities to be associated with the Colorado River storage project. An additional $0.5 million has been requested to continue these studies during the fiscal year 1961. No funds have been requested for transmission facility construction.

The first power-producing unit of the Colorado River storage project, the 108,000-kilowatt Flaming Gorge unit, will begin producing power in June of 1963. And in June of 1964, the 800,000-kilowatt Glen Canyon unit will begin to produce power. It is, therefore, essential that some transmission facilities for the marketing of this power be placed under construction during fiscal 1961.

On October 1, 1959 the major investor-owned power companies serving the Colorado River storage project area published a report advocating delivery of project power to preference customers over investor-owned utility company transmission facilities. The company report concedes, however, that the major backbone transmission facilities, necessary to interconnect the Federal power plants, should be constructed by the Federal Government.

Of recent weeks Mr. Harvey McPhail, formerly Assistant Commissioner of Reclamation and currently chief of the Hydroelectric Division of the Kuljian Corp. of Philadelphia, Pa., has completed a report for the rural electric cooperatives and other preference customers of the Colorado Basin States concerning the type of transmission system that will be necessary to deliver Colorado River basin project power in accordance with law.

The McPhail report reaches several important conclusions among which are—

1. The preference customers in the Colorado River Basin States will absorb all of the firm power available from the project.
2. No firm power will be available to private utilities from the Colorado River storage project.
3. The transmission proposal of the private utilities is not in keeping with the spirit and intent of the Colorado River Storage Project Authorization Act.

Based on these conclusions, Mr. McPhail recommends that because of the short time remaining before the initial availability of Colorado River storage project power, construction must begin in fiscal year 1961, on the initial phases of the Federal transmission system.

For these reasons we urge the subcommittee to include in the public works appropriation bill for fiscal 1961, $5 million to begin construction of the Glen Canyon to Curecanti and the Flaming Gorge to Oak Creek 230-kilovolt transmission lines.

The construction of these particular lines is not in controversy because even the investor-owned company plan for Colorado River storage project transmission anticipates that these two lines will be built by the United States. In view of the fact that preference customer loads will absorb the entire firm power available from the project, there would seem little reason for the utility companies undertaking major transmission expenditures. However, in appropriating initial funds for these two particular lines, Congress will not be prejudging whether the Federal transmission system or the combined Federal and private transmission system as proposed by the companies should be ultimately adopted.

CONCLUSION

This year the Congress is being asked to approve a budget of $80 billion. Of this, $46 billion, more than 57 percent of the total, is earmarked for major national security—for machines of death and destruction. Only some $2 billion, 2.5 percent of our total budget is earmarked for natural resource development.

Military security is most certainly deserving of the highest priority in the allocation of budget expenditures. But, we wonder whether those who describe our natural resource development program as "pork barrel" and demand that the Government stop its capital investment in river basin development—we wonder how far below 2.5 percent of our total budget these people would cut resource development investment; 2.5 percent of the total pie is a pretty small slice. And whereas our immediate future most certainly depends on the 57 percent of budget dedicated to military security, yet our long-range future rides almost as certainly on the 2.5 percent committed to resource development.

54770—60——10

COLORADO RIVER STORAGE PROJECT

Mr. ROBINSON. In general, Mr. Chairman, the rural electric systems support this year the budget estimate for the Bureau of Reclamation and other Interior Department power-marketing agencies.

There are two projects which we would especially like to call to the attention of the subcommittee. One of them is a budgeted item, and one of them is a nonbudgeted item. The nonbudgeted item is the matter of transmission facilities for the Colorado River storage project.

There are four or five electric cooperatives in Utah, Wyoming, Colorado, in New Mexico and Arizona that presently depend upon Federal power for their wholesale energy requirements. The preference loads in these States, the loads of the cooperatives and municipalities will absorb all of the power from the Colorado River storage project.

The first power from the project will be available in 1963 from the Flaming Gorge unit, and in 1964 the much larger Glen Canyon unit will come on the line. And for that reason, some transmission facilities must be started in fiscal year 1961 if power from these two units is to be delivered.

The Bureau of Reclamation, however, seems hesitant to ask for funds to begin transmission construction because it must make a choice between the transmission program offered by the investor-owned utility companies and a program consisting of all Federal transmission.

It is our belief that the program of the investor-owned utility company should be rejected because it will impede the interconnection of the Colorado River storage system with adjacent systems, particularly with the system of the Missouri River Basin transmission operated already by the Bureau of Reclamation. The investor-owned transmission system will place the companies between the units of the Colorado River storage project, and will thereby impede the interconnection of these units, and will certainly result in less benefit falling to the preference customers.

REQUEST FOR ONLY TWO LINES

But our point this year is that we ask for only two lines, the line from Flaming Gorge to Oak Creek, and the line from Glen Canyon to Curecanti. And they are shown on the map which is attached to the back of our statement in heavy black lines.

The construction of these two lines will not in any way prejudge as to whether ultimately the investor-owned transmission system or the Federal transmission system is adopted, because the companies themselves anticipate that these two particular lines will be built by the Federal Government even if the company builds all of the other lines, which we hope of course does not happen. But these two particular lines are noncontroversial, and we are asking, therefore, that $5 million be added to the appropriations bill to initiate construction of them.

There are other lines which it is desirable to start, but these two are a must, and not controversial, and they will be necessary to market power from the initial units of the project. And for that reason we are supporting this item in excess of the budget.

FEDERAL TRANSMISSION LINES IN IOWA

The other item about which I would like to speak very briefly is that of the Federal transmission lines in Iowa, for which $3 million is included in the budget.

The chairman may recall that last year the House subcommittee and this subcommittee agreed in adding to the bill some $800,000 to begin construction of these lines. And this year there is $3 million in the budget to continue them. We are urging that the full budgeted amount be appropriated for this item.

Now, we know that the utility companies in Iowa have appeared before this committee, and we think they appeared before the House subcommittee, and asked that the funds be deleted, that construction of the lines be postponed, and that they be allowed to interpose their wheeling arrangements between the Missouri River dams and the preference customers.

We like to think that the decision of the Congress last year in appropriating initial funds for these lines despite a Budget Bureau position to the contrary, constitutes a decision by Congress that the preference customers will get the maximum benefits from the Missouri River dams. And the chairman may recall that the testimony last year showed that if the companies were allowed to wheel this power it would cut in half the benefits that flowed to the preference customers in Iowa, as compared to the construction of the Federal transmission system.

The companies claim that more time is needed to study this Federal transmission system. But the only studies that really bear on this subject are two, whether the lines are feasible and whether the preference customers will benefit more by construction of these lines or by wheeling.

Even the Department of the Interior last year, in opposing construction of these lines, conceded that they are feasible; and the testimony showed, and the Department conceded, that the preference customers would benefit more by construction of a Federal transmission system than by the negotiation of a wheeling contract.

Chairman HAYDEN. Reference was made to some studies that were in progress at the Denver office of the Bureau of Reclamation relating to the Iowa transmission facilities. Do you know anything about that?

Mr. ROBINSON. No, sir; I don't, not with respect to the Iowa transmission system.

Chairman HAYDEN. As I say, I do not know the nature of these studies. I thought you might have some knowledge on this.

DIAGONAL TRANSMISSION LINES

Mr. ROBINSON. No; I haven't. But even where the routing of the lines changed in some respects to avoid perhaps the construction of lines that do not run perpendicular to the boundaries of land—the diagonal transmission lines, I believe they call them—it will still be necessary to appropriate funds to continue the Federal system unless the plan reverted to a wheeling contract which the Department itself concedes would result in less benefits to the preference customers.

Chairman HAYDEN. Well, now, could you detail for the record what the objection of a farmer is to having a transmission line going diagonally across his farm?

Mr. ROBINSON. Well, Mr. Chairman, I am in a very poor position to do that, because I am not a farmer, but maybe Mr. Ellis can add a little bit to that.

Mr. ELLIS. Well, we encounter it generally, Senator, in the building of lines, because as the farms become geared more and more to mechanization, it is more difficult to move around the superstructures—the poles or the steel towers—if they are sitting out in the field than if they were, say, along the edge somewhere. It is the nuisance value of them sitting out in the open.

Chairman HAYDEN. Why I asked the question was, there was complaint from some farmers in Iowa that they did not like the diagonal transmission lines because it interfered with their farming.

Mr. ELLIS. We do not think this is a serious thing at all. We get along with ourselves on it and rarely have any difficulty among ourselves about it.

Chairman HAYDEN. That is what I want to know, what has your experience been?

Mr. ELLIS. It is a minor matter with us. I don't think it is a serious problem at all.

Chairman HAYDEN. You have diagonal lines?

Mr. ELLIS. Yes.

Chairman HAYDEN. Many of them?

Mr. ELLIS. Many of them, all over the country; yes, we do.

COST OF RIGHT-OF-WAY

Chairman HAYDEN. Of course, if you are building along a section line and you get a right-of-way along a road, there would be no cost to that?

Mr. ELLIS. Yes, if it is on a highway. But often we have to go into the field anyway, even along a road, because both sides of the road have been taken up by power lines or telephone lines or a combination, or sometimes telegraph lines, and often we have to go into the fields anyway. And our people usually donate the right-of-way and easements.

Chairman HAYDEN. Thank you.

You may proceed.

Mr. ROBINSON. Mr. Chairman, in connection with that matter, the same question was asked and commented upon before the House subcommittee, and Congressman Anderson of Minnesota, who is a member of that subcommittee, remarked that during the construction of Federal transmission lines in Minnesota, which are essentially part of the same loop, the same question arose, and that the farmers in that part of the country were ultimately very well satisfied because the lines did not seriously interfere with their operations and they were paid well for the right-of-way that was taken.

Mr. Chairman, I think that concludes our oral presentation, and we thank you very much for allowing us to appear.

Chairman HAYDEN. Thank you, sir.

Your statement will be printed in full in the record.

Mr. Welsh.

NATIONAL RECLAMATION ASSOCIATION

STATEMENT OF WILLIAM WELSH

PREPARED STATEMENT

Mr. WELSH. Mr. Chairman, I wish that I had an adequate command of the English language to fully express the very deep feeling of appreciation that the members of our association have for the long and continued devoted service which you have personally given to the cause of reclamation. I can say truthfully and honestly that our members look upon you as the greatest friend that reclamation has ever had.

It isn't necessary—it wouldn't be necessary, Mr. Chairman, at all for me to say the things to you that I want to say this morning. But I would like to make just a few remarks for the record, and I would appreciate it if my statement can be included in the record.

Chairman HAYDEN. That can be done.

(The statement referred to follows:)

STATEMENT BY WILLIAM E. WELSH, SECRETARY-MANAGER, NATIONAL RECLAMATION ASSOCIATION

My name is William E. Welsh. I am secretary-manager of the National Reclamation Association. It has been my privilege to appear before this committee for the past 11 years in support of the reclamation program for the Western States in behalf of the National Reclamation Association. I wish at this time to express my appreciation to the members of this committee for the very courteous treatment and consideration that has been shown to me on these numerous occasions. Also, on behalf of the association, I wish to express our appreciation for the splendid treatment that has been given to reclamation by this committee over the years.

IMPORTANCE OF RECLAMATION

To a very large extent the future growth, development, and prosperity of the West depends upon reclamation. Based upon information contained in the last annual report published by the Commissioner of Reclamation and recently made available to the public, the reclamation projects of the West last year enjoyed the greatest and most prosperous year in all the history of reclamation.

As a major contribution to the economy of the Nation it was revealed that the total crop values of all the crops raised on the Federal reclamation projects of the West almost reached the figure of $1 billion, namely, $987,441,504.

Repayment record

Another high spot in the annual report was the remarkable repayment record of the settlers on the reclamation projects. That record is simply fantastic. The amount due and unpaid on September 30, 1959, would make any banker envious of that account. The amount due on that date was $140,294,831.61 and the amount unpaid was only $4,174.80; to state it in a different way, the amount that was due and unpaid on September 30 was less than one three-hundredths of 1 percent of the total amount that was due on that date.

The total cumulative value of all crops raised on all reclamation projects from the time the reclamation law was enacted up to and including the crop year of 1958 was $14,265,102,495. This is more than three times the total amount appropriated for reclamation since 1902. In that connection, it should be pointed out, however, that many of the large projects for which large appropriations have been made are still under construction and have not yet started producing crops. A great many of the other remaining larger projects have been brought under cultivation only during the past decade or so. It is also interesting to note that the total annual value of crops produced is more than three times the total annual appropriation.

The total amount of land irrigated on reclamation projects in 1958 was 6,756,737 acres. Of this amount, 3,405,057 acres received a full water supply, while

3,254,388 acres received a supplemental water supply from the Federal projects. Some of the projects receiving supplemental water received a major portion of their water supply from other sources, but the production on most of the supplemental water projects would have been far less without the water supply they received from the Federal projects.

Increase in income taxes

Numerous economic studies made on several different reclamation projects have revealed a fact that is not too widely known—that the increase in Federal income taxes from the projects areas and the areas supported by the projects are, in many cases, sufficient to repay the cost of the project about every 4 years.

GENERAL INVESTIGATIONS

For quite some time there has been an apparent misunderstanding by the general public with respect to authorized reclamation projects. Just a short time ago, in response to my request, the Bureau of Reclamation made available to us a list of projects pending and under various stages of consideration. This reveals very definitely that there is not an adequate backlog of reclamation projects. In fact, outside of the Missouri River Basin and the Upper Colorado River Basin, there are only two authorized projects pending before the Congress on which construction could be started if funds were made available, and the advance planning has not been completed on those two projects. They are the Canadian River project in Texas and the Spokane Valley project in Washington. With the exception of those two, there are no authorized projects ready for construction in any of the other areas of the West. This situation very definitely points out the need for adequate funds for general investigations.

BUREAU OF RECLAMATION INVESTIGATIONS

The trend that has developed in recent years in appropriations for general investigations and planning activities is a matter of increasing concern. The budget now before the Appropriation Committees includes requests for a total of $7,842,000 for the Bureau's planning programs. This is broken down with $4,650,000 for the general investigations program, $2 million for the Missouri River Basin planning work, $938,000 for the Colorado River advance planning program, and $254,000 for the construction and rehabilitation advance planning program.

Taking into consideration anticipated contributions of $104,000 and the fact that the fiscal year 1961 request includes $250,000 for an engineering methods and materials research program which heretofore has been financed from other sources, the overall request for the planning programs represents a reduction of $440,000 below the level of the planning funds available this fiscal year and a decrease of $797,000 from the level of the program actually accomplished in fiscal year 1959. This reduction also is reflected in the number of investigations the Bureau is capable of carrying on. In fiscal year 1959, there were approximately 150 investigations underway. This has been reduced to 139 this fiscal year and, with the further reduction in funds for the next fiscal year, only 115 investigations will be active.

Most of this reduction has taken place in the funds for the general investigations program which is the heart of the Bureau's planning program. On the basis of the requests now before the committees, this program is being curtailed from a level of $5,323,000 of work actually accomplished in fiscal year 1959 to $4,754,000 in fiscal year 1961, including anticipated contributions. This represents a reduction of $569,000, or almost 10 percent. Again this is reflected in the fact there were some 109 investigations underway in fiscal year 1959 whereas only 89 investigations will be active in fiscal year 1961. Or, expressed in another way, there were 25 new investigations started in fiscal year 1959, but, with the limited funds for fiscal year 1961 and the need to concentrate those funds on the work already underway, there will be only 13 new starts in the planning program next fiscal year.

If this trend is to continue it is inevitable there will be a gradual drying up of the reclamation program. It is these planning studies that culminate in reports that are submitted to the Congress for authorization and, after authorization, that complete the detailed preconstruction studies to prepare those projects for construction. Again I wish to emphasize that with the exception of the Upper Colorado River Basin and the Missouri River Basin, the Bureau of Rec-

lamation has no significant backlog of authorized projects. Even in those two basins, where there is a shelf of authorized projects, there are only a few developments on which the detailed advance planning work has been completed to the point where they are ready for construction. In the light of the tremendous growth that has taken place in the population of the United States in recent years and which is expected to continue in the future, it is essential this downward trend in the scope of the planning program be reversed.

In evaluating the need for planning and its relationship to the future needs of the Nation it must be kept in mind that most of the potential developments of today require several years of careful planning and the projects that are now under study will not reach full production for 10 to 20 years. It is evident that if the Nation is to meet this challenge it must be laying the groundwork now by carrying on an adequate planning program geared to long-range needs.

Another important consideration is the need for a stable and uniform planning program. The general investigation activity in the past has been characterized by wide fluctuations in annual appropriations. For instance, the total appropriations for the Bureau's planning program reached a low of $4,301,940 in fiscal year 1953. Over the next 5 years the appropriations for these activities were gradually increased to reach a peak of $8,834,000 in fiscal year 1958. Since that time the program has been gradually curtailed and the fiscal year 1961 request represents a reduction of almost $1 million from the 1958 level. This has resulted in inefficient and costly stop-and-go operations. With each reduction in appropriation, the Bureau loses highly trained technicians with many years of experience in water resources planning only to have to recruit and train new employees when the program is expanded. A stable program would enable the Bureau to maintain a more efficient organization.

Attached is a tabulation showing the appropriations for general investigations and advance planning over a period of years. This tabulation points out very clearly the fluctuations which have been most disturbing (exhibit 1).

RESEARCH IN ENGINEERING

Under the heading of "General Investigations" there is a request for $250,000 for research in engineering methods and materials. This item is to provide nonreimbursable funds to conduct research which would develop the use of new engineering methods and the application of new materials to bring about lower costs of reclamation projects. This research is necessary to be performed on a nonreimbursable basis since it is for the benefit of all reclamation projects. We do not believe that this type of research should, in equity, be charged against any one going project since the benefits endure for use on other projects. As an example, research in the field of suppressing evaporation from our reservoirs will benefit all future reclamation projects and, similiarly, research on new techniques. New materials, such as plastic canal linings, should not be charged to present projects. Also, much of the research work is published and made available for the benefit of all countries of the world.

Attached hereto is NRA Resolution No. 16 (exhibit 2) adopted at the last annual meeting of the association held in Denver, Colo., in October 1959 which fully sets forth the position of the NRA with respect to general research and laboratory costs and specifically urges that such costs should be made nonreimbursable.

NEW STARTS

We wish to express to this committee our very deep appreciation for the strong position taken a year ago in which a number of new starts were approved. We believe that those projects were extremely important and we strongly commend the committee for this reason. The budget recommendations this year include six new starts. We heartily endorse that recommendation and urge that the six new starts recommended in the budget be included in the bill to be reported out by this committee.

Attached hereto (exhibit 3) is a list of projects which were made available to us by the Bureau of Reclamation in response to a request which we submitted to them several months ago. This is a list showing the status of planning on proposed or potential reclamation projects. The first list marked "A" includes "projects now authorized on which construction could be started if funds were made available." This is the same list of projects recommended for new starts in the budget. The list marked "B" includes "authorized projects on which advance planning will probably be completed during the fiscal year 1961."

If the planning on these projects should be completed in time so that they will be ready for construction, then we urge that funds be made available either in the regular or a supplemental appropriation bill.

The "C" list includes "other authorized projects on which planning will be underway during fiscal years 1960–61." At the present time it is not known whether any of these projects will be ready for construction during the fiscal year 1960.

PROJECTS ALREADY UNDER CONSTRUCTION

While there may be one or two exceptions, we believe that the budget recommendations as a whole for projects now under construction are adequate to keep the construction program moving forward satisfactorily on those projects and we recommend and urge that the amount recommended by the budget be approved by the committee.

With respect to projects which have been authorized and for what initial appropriations have been made, I wish to call to your attention NRA Resolution No. 21 which was adopted at the last annual meeting of our association. A copy of this resolution is attached here to (marked "Exhibit 4").

Also, I wish to call your attention to Resolution No. 19 entitled "Adequate Appropriations for Water Development," copy of which is also attached hereto (marked "Exhibit 5").

THE AINSWORTH PROJECT

Sponsors of the Ainsworth project, Nebraska, have called my attention to a peculiar provision in Nebraska law to the effect that construction on a project must be started within 6 months after the Supreme Court has confirmed the contracts and finally approved the water rights. As they have explained it to me, this means that their money must be made available now, subject to confirmation of the contracts and final approval of the water rights; otherwise, they will lose their water rights. We believe this is a good project and urgently needed.

SMALL RECLAMATION PROJECTS

The National Reclamation Association, we believe, has a right to be proud of this program. We worked for quite a number of years in order to get a satisfactory law enacted by the Congress. We believe that the program is now proving to be very helpful and quite satisfactory. We are especially appreciative of the fact that this committee has approved appropriations for every project which has met the requirements of the law and been submitted to the committee for consideration. We wish to endorse the recommendations contained in the budget for the small reclamation projects program. Also, we are advised that there are at least two projects which would have completed the 60-day waiting period before the Interior and Insular Affairs Committees and will be ready for consideration for appropriations before the adjournment of Congress. We would like to urge favorable consideration for these projects by this committee and request that funds be made available.

SUMMARY

In summary, there are several points which I wish to emphasize and point out in connection with our overall reclamation program for the entire West:

1. It requires many years, often a quarter of a century to bring a major reclamation project into agricultural production.

2. The Nation's population is increasing at the rate of about 3 million per year.

3. We are losing each year more than a million acres of good crop land to suburban developments, shopping centers, airports, industrial developments, municipal expansion, highways, and other uses.

4. Our agricultural surpluses, which represent approximately 6 percent of our total production, could easily be wiped out by 1 bad year of drought similar to that of the 1930's.

In fact, there were several years during that period when agricultural production dropped as much as 25 percent.

5. Reclamation projects produce only very insignificant amounts of our surplus crops.

It is estimated that the following percentages are raised on reclamation projects:

	Percent
Wheat	2.2
Upland cotton	5.2
Corn	.46
Tobacco	None
Rice	.54

6. Our total cropland being farmed has remained practically the same for the last 40 years and there is very little likelihood of any material increase.

In view of the foregoing, we believe that we are fully justified in urging that the reclamation program for the West which has accomplished such an outstanding record should be continued on a sound and orderly basis in order to meet the demands of the future.

Again, I wish to express to the members of this committee our very deep appreciation for the splendid support which you have given to the reclamation program over the years.

EXHIBIT No. 1

Bureau of Reclamation appropriations for general investigation and advance planning

Fiscal year	Regular general investigations	Missouri River basin investigations	Construction and rehabilitation advance planning	Upper Colorado River fund advance planning	Total
1946	$7,950,000	$5,040,000			$12,954,000
1947	5,469,869	4,226,100			9,695,969
1948	2,498,309	3,611,697			6,110,006
1949	4,637,087	7,325,493			11,962,580
1950	5,577,500	10,798,775			16,376,275
1951	7,539,853	12,446,784			19,986,617
1952	4,535,534	6,064,696			10,600,230
1953	4,089,242	301,930			4,391,172
1954	3,000,000	1,457,431			4,457,431
1955	3,750,000	4,316,741			8,066,741
1956	5,104,000	2,915,000			8,019,000
1957	5,680,000	2,879,500		$1,575,000	10,134,500
1958	5,932,000	2,446,118		1,142,000	9,520,000
1959	4,556,000	2,201,900		836,104	7,594,000
1960	4,668,992	1,825,125		797,550	7,294,667
BUDGET RECOMMENDATIONS					
1961	$4,650,000	$2,000,000	$254,000	$939,000	$7,842,000

EXHIBIT No. 2

RESOLUTION No. 16—GENERAL RESEARCH AND LABORATORY COSTS

Whereas the Bureau of Reclamation has been engaged in the planning, construction, and operation of projects for the development of the water resources of the West since 1902; and

Whereas the Bureau of Reclamation has continuously sought the most advanced principles and techniques to assure reliable and economical construction, and through engineering research and development has made significant and important advances in the design and construction practices that have resulted in better and more economical structures; and

Whereas the Bureau of Reclamation continues to develop and apply new techniques and materials that result in great savings on water resource projects and these are available for the benefit of and the utilization by future projects and available to public and private construction in this country and abroad; and

Whereas the full cost of such research must now be charged against current projects and projects under construction, causing an inequitable charge for the immediate benefits derived in relation to the benefits accruing to all future projects, both private and public, thereby resulting in a heavy burden being carried by current projects alone: Now, therefore, be it

Resolved, That the National Reclamation Association supports and encourages continuation of Bureau of Reclamation engineering activities and recommends that funds should be made available for such research from nonreimbursable categories.

EXHIBIT NO. 3

BUREAU OF RECLAMATION—STATUS OF PLANNING ON PROPOSED OR POTENTIAL PROJECTS

A. Projects now authorized on which construction could be started if funds were made available:

1. Colorado River storage project: Curecanti unit, Colorado; Blue Mesa and Morrow Point Dams and powerplants: Florida project, Colorado.
2. Missouri River Basin projects: Almena unit, Kansas; Yellowtail unit, Montana-Wyoming.
3. Vale project, Oregon: Bully Creek extension.
4. Lower Rio Grande rehabilitation project: La Feria division, Texas.

B. Authorized projects on which advance planning will probably be completed during the fiscal year 1961: Missouri River Basin project; Chestnut Valley unit, Montana; Hardin unit, Montana; Kanapolis unit, Kansas.

C. Other authorized projects on which planning will be underway during fiscal years 1960–61:

1. Canadian River project, Texas.
2. Colorado River storage project and participating projects: Central Utah project, initial phase, Utah (exclusive of Vernal unit); Curecanti unit, Colorado, Crystal Dam and Reservoir, Emery County project, Utah; La Barge project, Wyoming; Lyman project, Wyoming; silt project, Colorado.
3. Missouri River Basin project: Cedar Rapids division, Nebraska; Garrison diversion unit, North Dakota-South Dakota (see group F); Glen Elder unit, Kansas; Jefferson unit, Montana; Mirage Flats extension unit, Nebraska; Narrows unit, Colorado; North Loup division, Nebraska; Oahe unit, South Dakota; O'Neill unit, Nebraska; South Dakota pumping Division, South Dakota; Crazy Horse, Tower, Yankton, and Greenwood units.
4. Spokane Valley project, Washington.

EXHIBIT NO. 4

RESOLUTION NO. 21—ADEQUATE APPROPRIATIONS FOR STARTED PROJECTS

Whereas Congress has in some instances failed to make needed appropriations for reclamation projects theretofore authorized and for which initial appropriations have been made and the project work started; and

Whereas the failure to make continued appropriations has resulted in extended delays and added costs: Now, therefore, be it

Resolved, That the National Reclamation Association urges that once a reclamation project is started, appropriations be made and sufficient appropriations continue to be made to enable the work to continue with dispatch and without increased costs resulting from time delays

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RESOLUTION NO. 19—ADEQUATE APPROPRIATIONS FOR WATER DEVELOPMENT

Whereas the objective of the National Reclamation Association is the complete development of the land and water resources of the West; and

Whereas such reclamation development, being of distinct benefit to the whole Nation, has been a Federal policy for more than half a century; and

Whereas a sound reclamation program is dependent in large measure on continued and coordinated investigation, planning, research, and construction programs of the several Federal agencies concerned with water resources development; and

Whereas the accomplishment of these programs calls for adequate appropriations by the Congress: Now, therefore, be it

Resolved, That—

1. The National Reclamation Association hereby directs its officers to support before the Congress requests for sufficient appropriations to—

(*a*) Permit the Bureau of Reclamation and the Corps of Engineers to continue progressive investigations, planning, and construction programs in consonance with the needs therefor;

(*b*) Support acceleration of the Forest Service program of revegetation, watershed restoration, range improvements, and physical improvements of national forests, which will improve water production and control erosion;

(*c*) Support and continue the snow surveys and streamflow forecasting of the Department of Agriculture;

(*d*) Permit prompt and continuing acquisition, publication, and distribution by the Geological Survey of basic data respecting both streamflow and ground water resources throughout the Nation;

(*e*) Permit completion of standard topographic mapping of the United States, if possible, by the year 1970;

(*f*) Support research, investigation, and action programs in soil and water conservation, basic, and essential to the sound development and full continued care of the Nation's land and water resources basinwide and in harmony with multiple-use projects development;

(*g*) Support the land capability inventory to be completed as soon as practicable;

(*h*) Support collection and dissemination of basic meteorological data by the U.S. Weather Bureau;

(*i*) Provide for the control and eradiction of noxious weeds on federally controlled lands;

2. The various departments and agencies affected should devise standards and procedures such as will eliminate or minimize duplication of investigations, research, and the basic work common to more than one department or agency;

3. Information developed by the Federal Government shall be made available, at reasonable costs, to all citizens who desire its use; and

4. The various affected States are urged to give full support to the foregoing program.

The above is a full, true, and correct copy of Resolution No. 19 adopted by the National Reclamation Association at its 27th annual convention held in Denver, Colo., October 28–30, 1959.

REVIEW OF STATEMENT

Mr. WELSH. I will cover these points very briefly.

First, with respect to new starts. The membership of our association was very much concerned when the word went out over the country a year ago that there would be no new starts.

It was my privilege last fall to attend 10 different State meetings. And I don't believe that there is anything that has happened in water resource development which has meant the same in the way of encouragement to our people than the fact that we were given those new starts last year, and they were very much appreciated.

When you get out into State meetings, as I did last fall, you find a very keen interest in the continued development of reclamation programs, and they were very appreciative of the action that was taken by committees of the Congress in inaugurating those new starts last year.

ENDORSEMENT OF PROJECTS

We note that there are six new starts recommended in the budget, and we endorse all of those six projects.

At my request, the Bureau of Reclamation furnished me a list of the projects showing the status of the various pending projects. That list is attached to this statement. I believe six new starts that are

recommended are all of the projects that are ready for construction at this time.

Chairman HAYDEN. That is, they have adequate engineering studies?

Mr. WEISH. Yes, and these are the only projects that are ready for those starts. There are others that will be made ready during the year, and we hope if they are they can be taken care of.

With respect to the growing projects—that is, the projects under construction—we feel that the budget recommendations will take care of those projects as a whole in pretty good shape; there may be one or two exceptions, but as a whole they will take care of those projects in fairly good shape.

We endorse, of course, that program that is under consideration.

I have been requested by the sponsor of the two different projects to say just a word about those projects.

AINSWORTH PROJECT

The Ainsworth project. I understand they have a rather peculiar law in the State which requires that the projects must be under construction within 6 months after the confirmation by the courts of the contracts and of the water rights. And I just have a newspaper clipping that appeared in the paper this morning stating that the Supreme Court has confirmed the contracts and the water rights on the Yellowtail project. We have endorsed that on several occasions in the past, and we are glad to add our endorsement to it again this year.

YELLOWTAIL PROJECT

I understand it isn't so much just the Yellowtail itself, but the fact that a number of developments or projects proposed along the river are dependent upon this project, and it will make feasible a number of projects.

"General investigations" is a matter that has been of vital concern to me over a long period of years. It constitutes the very heart of future reclamation. And we are finding interest in seeing that program maintained in a manner commensurate with the needs and importance of the western half of the United States.

Chairman HAYDEN. We had this illustrated when the New Deal came in, in 1933, and appropriations were made for a number of projects that were supposed to be ready. As it turned out, none of them were ready, with the result that in order to find work for the unemployed, Harry Hopkins in a modest way started the Works Progress Administration. Before we got through, Mr. Hopkins had spent more money on those minor projects than had been spent on the ones that Congress had in mind when they appropriated the money.

Mr. WELSH. Mr. Chairman, out in Idaho we felt—we expressed it this way at the time—that we missed the boat in the thirties when the big program was inaugurated because our projects in Idaho had not been surveyed and were not ready.

Chairman HAYDEN. Anything that was ready was moved, but it just turned out that way.

Mr. WELSH. The majority of them were not ready; that is a fact.

SMALL PROJECTS PROGRAM

Now, the small projects program. That has been a source of pride with our association. We sponsored those bills over a period of some 8 or 9 years before we finally got a law that we thought would work satisfactorily. That is in operation now, and a number of projects have already started. We feel that it is working very satisfactorily.

I feel that there will be some corrections to be made in the law as it goes along.

One of our objectives was to eliminate as much redtape as possible. I don't think we have entirely succeeded in that respect. Nevertheless, the program is working and going along satisfactorily.

One thing that we note with considerable interest is that nearly every project that has come before the Appropriations Committee, small projects project, has been approved by this committee. And we appreciate that.

There are several before you, and I understand that there are some pending before the Congress that may have completed the 60-day waiting period before the Congress adjourns. And we hope that those may be given consideration also.

Thank you very much.

Chairman HAYDEN. Thank you.

Mr. John Richardson.

COLUMBIA BASIN PROJECT

STATEMENT OF JOHN RICHARDSON, SECRETARY, COLUMBIA BASIN COMMISSION, AND SUPERVISOR, DIVISION OF RECLAMATION, DEPARTMENT OF CONSERVATION, STATE OF WASHINGTON; ACCOMPANIED BY WILLIAM McANLIS, SECRETARY-MANAGER, EAST COLUMBIA BASIN IRRIGATION DISTRICT, OTHELLO, WASH.

PREPARED STATEMENT

Mr. RICHARDSON. Mr. Chairman, my name is John Richardson. I am secretary of the Columbia Basin Commission, and supervisor of the division of reclamation, Department of Conservation of the State of Washington. I am accompanied by Mr. William McAnlis, secretary-manager of the East Columbia Basin Irrigation District, Othello, Wash.

I have submitted a statement to the committee, and I will just highlight it briefly.

Chairman HAYDEN. The statement will be included in full in the record.

(The statement referred to follows:)

STATEMENT OF JOHN RICHARDSON

Mr. Chairman, my name is John Richardson. I am secretary of the Columbia Basin Commission and supervisor of the division of reclamation, Department of Conservation of the State of Washington. I am accompanied by Mr. William McAnlis, secretary-manager of the East Columbia Basin Irrigation District, Othello, Wash.

In appearing before the committee at this time a year ago, I reported that the three Columbia Basin project irrigation districts had agreed to put an amendatory repayment contract to a vote by the water users. That new contract called

for repayment at the rae of $125 per acre, on the average, compared with the existing contract of $85 per acre.

The East Columbia Basin Irrigation District voted on June 28, 1959. The $125 contract was rejected by a vote of 897 to 327. Elections in the other two irrigation districts were canceled, as the contract was dependent on passage in all three to become effective.

Since that time, the Commissioner of Reclamation, Mr. Dominy, has visited the project. In a series of four meetings with the water users, he urged that they accept a contract of $133.50 per acre, on the average, with the repayment period extended to 50 years, compared with 40 years in the existing contract.

Meanwhile, the Commissioner has notified the districts that operation and maintenance charges, now averaging $6 per acre annually, must be increased by an additional $1.65 per acre for the purpose of financing drainage construction in calendar year 1960. The Commissioner has notified the boards of directors that water cannot be delivered after May 1, 1960, unless water payments are made or unless legislation is enacted which alters this requirement.

To this end, Senate Joint Resolution 162 was introduced by Senators Warren G. Magnuson and Henry M. Jackson. A similar measure, House Joint Resolution 625, has been introduced by Congresswoman May.

Senate Joint Resolution 162 was unanimously approved by the Senate Committee on Interior and Insular Affairs on April 1. It provides for a 2-year moratorium in additional drainage construction charges, permitting the Secretary of the Interior to go ahead with such work while an amendatory contract is being worked out.

In addition, Senate Joint Resolution 162, establishes a board of review, which is directed to conduct hearings on the project and fully investigate the repayment contract controversy. The board of review is to report its findings to the Congress by February 1, 1961.

This board is to investigate all phases of the project, including repayment problems, the utilization of power revenues from Grand Coulee Dam and the economic situation of the water users.

As you know, one of the factors involved is the matter of constructing drainage facilities to serve the planned 1,055,000-acre project. In the existing contract, signed in 1945, provision was made for building drainage works as part of project construction costs in an amount of $8,176,000. This was included as part of the $281 million construction ceiling in the 1945 contract.

Now, the Bureau estimates project drainage works will cost $44,500,000. The $133.50 per acre contract offered by Commissioner Dominy would capitalize these costs as part of project construction. All costs above this figure would be covered by power revenues from Grand Coulee Dam.

The water users agree to capitalization of drainage construction costs. They strongly disagree that their costs should be raised from $85 to $133.50 per acre, or any other figure above that they are paying now.

Their existing contract provides for a reduction of the water users' repayment to $70 per acre, if circumstances warrant. It provides that power revenues would pay increased project costs, if necessary by extending the payout schedule on power features. Such extensions already have been made by the Bureau of Reclamation, moving the project power feature payout from the year 2017 to the year 2038.

Power revenues to pay costs above $85 per acre are available. The project has been justified before the committees of the Congress each year on this basis. The benefit-to-cost ratio of the project remains at better than 4 to 1.

SOLUTION

Essentially, the farmers feel that the solution to the impasse is removal of the $281 million and $8,176,000 ceilings in the existing contract, with power revenues from Grand Coulee Dam bearing additional irrigation and drainage construction costs.

Since water was available to the first large number of farms in 1953, the farmers production costs have steadily increased, while their crop returns have drastically declined. Under these conditions of a cost-price squeeze, Columbia Basin project farmers have been attempting to bring raw land into production. Many are underfinanced. The U.S. Farmers Home Administration, by law directed to assist only those farmers unable to obtain credit through normal commercial channels, is financing 50 percent of the project farmers under various programs administered by that agency.

Production of sugar beets, the stabilizing factor in the economy of most Western reclamation projects, is largely foreclosed to the Columbia Basin. The project got started too late to gain an historic quota of sugar beet acreage. Sugar beets were produced on 12,000 acres last year . A minimum of 80,000 acres is adaptable to this crop on the project. Those fortunate few farmers on the Columbia Basin who have sugar beet allotments are the ones in the most favorable economic position at this time. We have recommended that the annual increase in domestic sugar consumption be assigned the reclamation project areas and not be divided with Cuba, as is the case in the present U.S. Sugar Act

An amendatory repayment contract is not the major factor in making a success of the Columbia Basin project. Adequate financing of a long-term nature, provision for processing and marketing facilities, sugar beet acreage and development of a livestock industry, none of which are now available, all are part of the project picture. Under the program intensively studied in the early 1940's, agencies of the Federal Government were to asist in these matters. Very little of this plan has materialized.

No reclamation project was studied more completely prior to development than the Columbia Basin. These studies, known as the Columbia Basin joint investigations, were published by the Bureau of Reclamation in 1941. Twenty-eight problems, covering every facet of project development, settlement, and operation, were studied by more than 450 individuals representing Federal, State, and local agencies and private interests.

Except for the U.S. Farmers Home Administration, which is doing a good job under restrictions of a program based on national conditions and not those specifically encountered by new farmers on reclamation projects, Federal farm credit agencies have operated only to a minor degree on the project. Cooperative marketing and processing agencies, planned to be developed with the assistance of the U.S. Department of Agriculture, have not materialized.

The President's budget for fiscal year 1961 proposes $6,100,000 for construction on the Columbia Basin. This is the lowest construction budget in the history of the project. Water will be made available for less than 8,000 new acres on the project.

The operation and maintenance budget is $6,600,000. Of this amount, $2,812,000 is for the irrigation portion of the project and $1 million is for drainage construction. The position of the State and the project irrigation districts before this committee a year ago was that drainage funds should be considered part of the project construction budget, rather than as an operation and maintenance item. We wish to restate this view.

The review board suggested in Senate Joint Resolution 162 would consider this matter in recommending an equitable allocation of repayment obligations. The Bureau of Reclamation agrees that any new repayment contract should capitalize drainage costs as a major item of project construction.

An item of $450,000 is included in the construction budget for investigations in the future east high canal irrigation area. The district most affected, the East Columbia Basin Irrigation District, fully supports continuation of this work. The other two districts and the State concur.

We recognize the inevitable lag between completion of these investigations and the beginning of construction and strongly urge that they proceed as scheduled. Full information on the lands to be served by the east high and the east low canal extension is needed as soon as possible so that plans for the second Bacon siphon and tunnel on the main canal may be formulated. A portion of the capacity of the Bacon siphon will be needed to adequately serve lands within the existing portion of the project.

We wish to indicate our support for other items in the President's budget for Washington reclamation areas. These include the Roza project, $65,000 for construction; the Tieton division, $224,000 for rehabilitation and betterment; the Yakima project, $226,000 for operation and maintenance; the Spokane Valley project, $100,000 for advance planning, and various general investigations on new projects, $285,000.

A year ago the committee added funds to the budget to start construction on the Greater Wenatchee project. This was one of the "new starts" to which the President objected. We especially wish to express to the committee the appreciation of the people of the area and the State of Washington for this action.

The fiscal year 1961 budget request for Greater Wenatchee is $2 million and we wish to support this request.

GENERAL STATEMENT

Mr. RICHARDSON. Thank you.

The President's budget for fiscal year 1961 proposed $6,100,000 for construction in the Columbia Basin. This is the lowest construction budget in the history of the project.

There was an interesting remark just now on starting some of these project back in the thirties.

The Grand Coulee Dam was started in 1933 with National Industry Recovery Act funds; in fact, it was under construction for 2 years, and it wasn't authorized until 1935, and it was that point of getting people to work and getting jobs out there that this unusual step was followed.

Chairman HAYDEN. It was authorized in that act by providing for the development of hydroelectric power.

Mr. RICHARDSON. Yes, sir.

As I said, this is the lowest construction budget in the history of the project, $6,100,000. Less than 8,000 acres will be brought in in new lands under this budget. The operation and maintenance budget is $6,600,000. This is the first time that the O. & M. has been higher than the construction.

Of this amount for O. & M. $2,812,000 is for the irrigation portion of the project, and $1 million for drainage construction.

DRAINAGE PROBLEM

Chairman HAYDEN. I want to ask you about your drainage problem. Have you been able to whip it?

Mr. RICHARDSON. The drainage problem is going to be a very severe one, and this is a very complicated factor in the project right now.

As you may recall, the contract that the irrigation districts have with the United States, signed in 1945, provided for $8,176,000 to be spent on drainage for the whole million acre project. The Bureau of Reclamation estimates now as of last year that this cost will now be $44.5 million as compared with $8,176,000.

Chairman HAYDEN. Well, it is a universal experience that you cannot tell just what is going to happen when you apply irrigation water to the land. Sometimes it disappears and other times it does not.

Mr. RICHARDSON. Yes, sir. In our case it has backed up.

Chairman HAYDEN. Drainage has to follow irrigation?

Mr. RICHARDSON. Yes, sir.

DRAINAGE FUNDS AS A CONSTRUCTION ITEM

Chairman HAYDEN. When you stop to think about it, it follows that flat lands, suitable for irrigation, do not have the advantage of natural drainage.

Mr. RICHARDSON. On this drainage construction item, the position of the State in project irrigation districts before this committee a year ago was that drainage funds should be considered a part of project construction rather than an O. and M. item, and we wish to restate this view and request the committee to make this appropriation for drainage as a construction item.

RESOLUTION

On Monday of this week, Senate Joint Resolution 162 was adopted by the Senate. It is right in line with this drainage problem. The $8,176,000 limit is being reached, and the Bureau of Reclamation has requested the districts to levy an additional $1.65 per acre for drainage on their O. and M. budget for this year, which is $6 an acre already. And in the efforts to iron out a way of handling this whole problem and funding the drainage, we have, through Senators Jackson and Magnuson, requested that a resolution be introduced that would provide a 2-year period of moratorium on these charges while the Secretray of the Interior goes ahead and constructs drainage so that we can work out a whole new program to handle just these funds.

Chairman HAYDEN. I will have the clerk place a copy of that resolution in the record.

Mr. RICHARDSON. Yes, sir; it has been adopted by the Senate, it has not been by the House. The resolution follows:

[S.J. Res. 162, 86th Cong., 2d sess.]

JOINT RESOLUTION Authorizing the Secretary of the Interior during the calendar years 1960 and 1961 to continue to deliver water to lands in certain irrigation districts in the State of Washington, and for other purposes

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That pending completion of amendatory repayment contracts the Secretary of the Interior is authorized during the calendar years 1960 and 1961 to continue to deliver water to, and to construct such drainage works as are required for, the lands in the Quincy-Columbia Basin Irrigation District, the East Columbia Basin Irrigation District, and the South Columbia Basin Irrigation District, State of Washington, under the provisions of the existing repayment contracts with such districts, notwithstanding the provisions of article 7 of such contracts.

SEC. 2. (a) There is hereby established a Board of two members appointed irrigation farming and related economic factors, who are not officials or employees of the Department of the Interior and have no financial interest in the matters to be investigated by the Board. One of such members shall be selected by the Secretary from a list of not less than three qualified citizens submitted to the Secretary by the Governor of the State of Washington. The members of the Board shall select a Chairman. The Board shall make an investigation of all phases of the reclamation program on the Columbia Basin project, including repayment problems, the utilization of power revenues, and all related economic considerations, with particular reference to the repayment ability of water users. This investigation shall be for the purpose of recommending bases for amendatory repayment contracts between the project districts and the United States. The Board shall submit a report of its findings and recommendations to the Congress, through the Secretary of the Interior (with his comments) by February 1, 1961. Each member of the Board shall receive $50 per diem and reimbursement for travel, subsistence, and other necessary expenses when engaged in the performance of duties vested in the Board.

(b) The report of the Board shall not be presented as an arbitration of the matters in dispute, but shall be considered by the Secretary and the Congress with other presentations in resolving the questions at issue.

SEC. 3. There are hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, such amounts, not in excess of $50,000, as may be necessary to carry out the provisions of this resolution. The Board is authorized to appoint and fix the compensation of such employees as it deems advisable without regard to the provisions of the civil service laws and the Classification Act of 1949, as amended.

Passed the Senate April 11, 1960.

Attest: FELTON M. JOHNSTON, *Secretary.*

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OTHER PROJECTS

Mr. RICHARDSON. On other reclamation projects in the State of Washington we wish to support the President's budget request. These include the Roza project, $65,000 for construction; the Tieton Division, $224,000 for rehabilitation and betterment; the Yakima project in general, $226,000 for operation and maintenance; the Spokane Valley project, $100,000 for advance planning and various general investigations, the program that Mr. Welsh referred to, $285,000.

And we wish to express our appreciation for the action of the committee in the Congress a year ago in adding a new start in our State. This was Greater Wenatchee project, the fiscal year 1961 budget for Greater Wenatchee, $61,000, and we wish to press this request.

We would be glad to answer any other questions you may have.

Chairman HAYDEN. Mr. Radin.

AMERICAN PUBLIC POWER ASSOCIATION

STATEMENT OF ALEX RADIN, GENERAL MANAGER

PREPARED STATEMENT

Mr. RADIN. Mr. Chairman, my name is Alex Radin. I am general manager of the American Public Power Association, which is a national service organization representing primarily municipalities that own their electric systems and other local public agencies such as public utility districts and other electrical districts.

I have a written statement which I would appreciate having inserted in the record, and then I would just like to cover a few high spots.

Chairman HAYDEN. That may be done.

(The statement referred to follows:)

STATEMENT BY ALEX RADIN

My name is Alex Radin, I am general manager of the American Public Power Association, a national trade organization representing more than 1,000 local publicly owned electric systems, mainly municipally owned systems, in 42 States and Puerto Rico. Our offices are at 919 18th Street NW., Washington, D.C.

We support economically feasible multipurpose projects, because such projects add to the national wealth and promote a more vigorous economy. We would like to go on record in favor of adequate appropriations for fiscal year 1961 for a number of specific projects in various parts of the Nation. I will discuss these projects briefly.

We support the President's budget requests for appropriations for the following Bureau of Reclamation multipurpose projects:

$2,500,000 to begin construction on Yellowtail Dam in Montana-Wyoming; funds for continued construction at Glen Canyon Dam (Arizona-Utah), $35,535,000, and Flaming Gorge Dam (Utah-Wyoming), $12 million, in the Colorado River storage project, and for $1,400,000 to begin construction at the Curecanti Project in Colorado; and $487,500 for work on the Burns Creek Project (Idaho), assuming that authorizing legislation will be approved this year.

Two of these projects—Yellowtail and Curecanti—are new starts, and we especially recommend approval of the requested appropriations so that the development of feasible multipurpose sites may continue at a reasonable rate.

CALIFORNIA: TRINITY RIVER DIVISION, CENTRAL VALLEY PROJECT

The budget request for fiscal year 1961 for the Bureau of Reclamation includes $13,861,500 for power facilities and transmission at the Trinity River division of the Central Valley project in California. This includes $4,087,500 for Trinity powerplant; $4,790,000 for the Clear Creek powerplant; $4,020,000 for the

Spring Creek powerplant; $5,000 for planning of the Lewiston powerplant; and $959,000 for a Trinity-Keswick transmission line.

We urge approval of these funds so that planning and construction of the power facilities may proceed at an orderly, efficient, and economical rate.

TRANSMISSION FACILITIES—BUREAU OF RECLAMATION

The budget request for the Bureau of Reclamation includes funds for a number of Federal transmission lines which are needed to economically market federally generated power.

We support the request for $2,997,000 for continued work on transmission lines from the Missouri Basin project into Iowa. These lines, for which initial appropriations were approved last year, will permit a number of municipal electric systems and rural electric cooperatives in western Iowa to obtain Missouri Basin power, and will provide an additional market for this federally generated power.

In addition, we recommend an appropriation of at least $5 million to begin work on key Federal transmission lines in connection with the Colorado River storage project. Funds for this purpose are not included in the President's budget requests. This committee has received testimony from the Colorado River Basin Consumers Power, Inc., a group of preference customers in the States of Colorado, New Mexico, Utah, Wyoming, and Arizona concerning the urgent need for appropriations to enable the Bureau of Reclamation to proceed with work on transmission facilities.

We support the testimony of this consumer organization, which has had an engineering study made by the Kuljian Corp. on the need for an adequate Federal transmission system in connection with the Colorado River storage project.

The Kuljian Corp. report indicates the urgent need that funds be made available to start construction in the summer of 1960 on transmission lines from Flaming Gorge to Oak Creek, and from Glen Canyon to Farmington and Curecanti. We urge the committee to appropriate funds to start construction on these lines, and also to make available funds for rights-of-way, design, and other preconstruction work on Federal transmission lines from Glen Canyon to Phoenix, Glen Canyon to Albuquerque, Glen Canyon to Provo-Vernal, and Flaming Gorge to Sinclair, Wyo.

House Document 1087 of the 84th Congress makes it clear that the Congress intended that, under power marketing arrangements for the Colorado River storage project, "power preference laws are complied with and project repayment and consumer power rates are not adversely affected."

It is apparent from the engineering studies by the Kuljian Corp. that the preference customers in the five-State area will be able to use all the firm power output of the Colorado River storage project; that the sale of this power at firm power rates is vital to enable the project to meet payout requirements and to proceed with further reclamation development as envisioned by Public Law 485 of the 84th Congress; that an adequate Federal transmission system is essential to equitable marketing of this power to the preference users at reasonable rates; and that the proposed private utility transmission system is inadequate in terms of the requirements of the Federal Government, the reclamation needs of the area and the power requirements of the preference users.

As the engineering report points out, "Too long delay has already occurred and transmission line construction must be provided for in 1960 to meet the dates of initial power production from project plants." We therefore urge that adequate funds, a minimum of $5 million be made available to the Bureau of Reclamation for fiscal year 1961 for work on Federal transmission lines in connection with the Colorado River storage project.

GENERAL STATEMENT

Mr. RADIN. First, I would like to express our appreciation for the new starts in the reclamation projects which are in the budget. We would like to support those.

I am speaking particularly of the Yellowtail and Curecanti projects. As the chairman knows far better than I do, these reclamation proj-

ects are extremely valuable over the period of the reclamation program. It is my understanding that the value of the crops that have been produced on these reclamation projects is about $14.2 billion, which is about five times the amount of the Federal investment.

The Salt River project, which is a member of our organization, has been an even more dramatic demonstration of the value of these projects. The Federal investment of $10 million in that project has been repaid in full, and Federal income taxes in Maricopa County, 80 percent of whose residents are served by the Salt River project, have amounted to about $1 billion over a 25-year period. So the value of these projects is very clear.

I would like also to indicate the support of our organization for several transmission line programs which we strongly favor.

Upper Colorado Project

First, the transmission lines in the upper Colorado project. There was, I believe, a rather large group here yesterday to testify in support of those transmission lines. We would like to indicate our wholehearted support of their request for an appropriation for the construction of these transmission lines in the upper Colorado project by the Federal Government. The reason for our interest is that there are about 90 municipal and other local public electric systems in this five-State area, many of whom now have power costs that are among the highest in the Nation. I believe some of the municipals are paying as much as 11 mills per kilowatt-hour for purchased power, and they would find it a great advantage to be able to buy power from this project.

As for the justification for these Federal lines, we believe there are several points that indicate why these should be built by the Federal Government.

First of all, the preference customers can use all of the power from that project immediately themselves, and so there doesn't seem to be the need for private utility tollgates to deliver this power to them.

Secondly, the Federal line would be a common carrier line, and would permit the most efficient use of the Federal system insofar as diversity of time zones and diversity of loads between north and south is concerned.

Thirdly, the Federal system would be amortized in full, with interest, so it would represent no ultimate cost to the Federal Government.

And, fourthly, the preference customers would be able to use all of this firm power immediately and buy it at firm power rates so that the maximum return to the Federal Government would be obtained through the Federal construction of these lines. By doing so, and by making this maximum return, additional funds would be available for other reclamation projects.

So because of these and other reasons, we believe there is very strong justification for the construction of these transmission lines by the Federal Government, and we believe there should be an appropriation of at least $5 million this year to start this program, preferably more, because I think more can be used. I believe as much as $10 million can be used efficiently for this program.

MISSOURI BASIN PROJECTS

Another item which we wish to express our support of is the transmission line program in Iowa from the Bureau of Reclamation Missouri Basin projects. Those transmission lines were started last year. We support the budget request for $2,997,000 to continue that program.

There, too, the money is needed because there are 33 municipalities in that area that have been allocated Bureau of Reclamation power, but only 11 have been able to receive power thus far because of the lack of transmission lines to deliver it. We believe this program is very similar in many ways to the program in the Upper Colorado River Basin, and should go forward.

The last item I want to mention is the Trinity project in California. We want to support the budget request for continuing work on the power features of that project.

As the chairman knows, that project is well on its way to completion, and the power facilities must move ahead in order to take advantage of the falling water that will be available in that project. So we wish to indicate our wholehearted support for continued funds for that project to keep it on schedule.

Thank you very much, Mr. Chairman.

Chairman HAYDEN. Thank you.

Mr. Fraser.

YELLOWTAIL DAM PROJECT

STATEMENT OF WILLARD E. FRASER, BILLINGS, MONT.

PREPARED STATEMENT

Mr. FRASER. Mr. Chairman, my name is Willard Fraser, of Billings, Mont., and I would like to submit a statement for the record and say just a very few words.

Chairman HAYDEN. That may be done.

(The statement referred to follows:)

My name is Willard E. Fraser and I am a resident of Billings, Mont., since 1912. I own and operate an office building and an apartment in that city.

I am once again appearing before another congressional committee in behalf of Yellowtail Dam on the Big Horn River in southeastern Montana. I say "again," for off and on since 1949 I have been appearing before congressional committees in behalf of the Yellowtail Dam, and it is hoped that this will be the last necessary appearance.

Yellowtail Dam was authorized under the Flood Control Act of 1944, and has had approximately $3 million appropriated to date by Congress for preliminary work, plus an added $4 million for actual construction, only to have about three-fourths of that last sum snatched away after a $5 million payment to the Crow Tribe was vetoed by the President as being an excessive payment for the damsite owned by the Crow people. Since that time the Congress did appropriate $2½ million for the tribal-owned damsite, which in turn was accepted by the Crow Tribe, and the President's budget now provides for Yellowtail Dam construction: so it would seem that all obstacles have been removed.

With all the above appropriations having been made, and more than $5 million having been spent solely in the interest of constructing the Yellowtail Dam, it would be untrue and unfitting to say that the Yellowtail Dam comes under the "no new starts program" of the administration, for Yellowtail Dam is over $5 million underway. To spend this large sum without continuing the job would be unsound, uneconomic, and unpolitic irregardless of what political party or administration might be in power, and in Montana both political parties have recognized this fact in legislative action.

The Flood Control Act of 1944 was a courageous plan on the part of the Congress to harness the resources of the vast Missouri River Basin, but no plan, however grand, can have any real meaning or effect until it is put into operation.

The approved, and now Government-owned, site of the Yellowtail Dam is near the mouth of the Big Horn Canyon, passageway of the Big Horn River, located some 35 miles southwest of Hardin, Mont., and some 40 miles southeast of Billings, Mont.

EXTENT OF RESERVOIR

The Yellowtail Reservoir would extend more than 50 miles within the rugged and inaccessible canyon walls which tower hundreds of feet above the twisting Big Horn River that winds its way north through the Big Horn and Pryor Mountains to form the most nearly perfect damsite, a damsite rarely equaled in nature. No arable farmland would be displaced or taken from cultivation, nor would any potentially valuable mineral deposits be inundated, for almost all of the steep canyons through which the Big Horn River wends its way are steep limestone cliffs, the only exception being a short distance where the cliff structure is of a sandstone conglomerate.

Yellowtail Dam is no newly proposed, or suddenly conceived project. Rather, it has been the aim and dream of some of the soundest and straightest thinking men the West has produced since the turn of the century. Montana and Wyoming have sent men of great stature to the Congress through these long years, who have seen and realized that Yellowtail Dam can give value to their respective States and Nation. Senator John B. Kendrick, of Wyoming, and Senator Thomas Walsh, of Montana, are but two of the many outstanding Senators, past and present, who have advocated and worked for Yellowtail Dam, and have sought its construction. Business, educational, farm, Indian, labor, and veteran leaders and organizations of Montana and Wyoming have repeatedly urged the construction of Yellowtail Dam, for its importance to the economic growth of this undeveloped area is now fully understood by all civic, business, farm, and other community leaders.

SILT PROBLEM

In previous hearings, we were reminded that there was a silt problem of the Big Horn River that should be solved before the Yellowtail Dam should be built. With the construction of the Boysen Dam near Thermopolis, Wyo. the major silt problem has now been solved. Then we were told that there should be a river compact between Montana and Wyoming. This compact has been made, and is now in full force and effect. Lastly, we were told that we must make a satisfactory settlement with the Crow Tribe before the dam could be constructed, and this, too, has now become an accomplished fact. Thus, all three objections or hurdles have been cleared; so now it is time to get on with the job, on which—as previously stated, some $5 million have already been spent. Great effort has gone into the solving of these three problems, and this through the united efforts of men of Montana and Wyoming, plus the efforts of strong men in Washington, as well as the Governors of both States. And, I might add that men of both major political parties have added their bit to this work and that it can hardly be called a partisan matter is evidenced in the fact that every session of the Montana Legislature, since and including 1949, has passed memorials urging the construction of Yellowtail Dam, and, in every case, the memorial was signed by the Governor, yet during that period both parties have alternated in control of both bodies of the legislature, as well as the Governor's office.

FLOOD CONTROL

Flood control is a very important asset to be gained by the construction of Yellowtail Dam. During recent years, the cities of Miles City and Glendive have been repeatedly hardhit by floods. The region in which the Yellowtail Dam will be constructed is one of slight rainfall, but of rapid runoff of such rain, and spring snowmelt. Then too, the soil in this area is of a peculiarly friable nature easily aroused by the runoff. Indeed, it has been estimated that 26 percent of the silt carried past Kansas City by the Missouri River comes from the Big Horn River, and that 52 percent of the silt carried by the Yellowstone River past Glendive, Mont. is Big Horn River originated. This adds immeasurably to the costly dredging so necessary in the navigable downstream areas. So too, does the Big Horn River's spring runoff contribute to the flood damage

of the lower Missouri States area. Dike and levee building along the lower basin area is costly, as is the aforementioned dredging operations. Engineers advise that the construction of the Yellowtail Dam will materially cut down on these costs, for it is now realized that flood damage cost in one area must be shared by all America.

ELECTRICAL ENERGY

The electrical energy that will come from the fall of the waters of the Yellowtail Dam will serve to firm up the power grid, and add to the industrial potential of the northern Wyoming, and southeastern Montana areas, plus the fact that there will be an increasing need for domestic power as those fast-growing areas increase in population.

The population of our country is increasing at an ever more rapid rate, and agricultural lands are becoming more and more valuable. Yellowtail Dam will put many thousands of acres of land under irrigation, taking land that is now producing crops (wheat especially) of which we are in overproduction, and replace this with crops that are in demand, such as sugar beets and meat or feed crops.

Presently, only 18 farm families operate the area to be brought under the ditch by Yellowtail Dam, and their production is largely confined to wheat, a product in overproduction. If this land is brought under the ditch, several hundred farm families would find self-supporting homesteads where, as stated above, now only 18 farm families operate.

NEW JOBS FOR CROW INDIANS

Our Crow Indian people stand to gain immeasurably from the construction of Yellowtail Dam, for with its completion will come the possibility of jobs that will assist them to adapt their ways to that of the white man, a possibility that is now almost completely denied them.

Yellowtail Dam meets without question the multipurpose requirements of the Bureau of Reclamation for dam construction. Its construction would be an outstanding achievement in the realm of reclamation, soil conservation, irrigation, silt control, power development, and not to mention or overlook the fact that it would provide Wyoming and Montana residents, and residents of all America, one of the greatest lake recreation areas in the Western Hemisphere. What the Yellowtail Dam would do for fish and wildlife goes without saying, and the profits to be derived from the Nation's sportsmen would be tremendous. Today the river is too muddy and silt laden for gamefish to survive, and no wildlife can exist in the canyon bottoms, for there simply is no room for forage to any degree sufficient to sustain them.

CONCLUSION

In conclusion, let me state that there is no area in the entire Missouri Basin more worthy of consideration and legislation bringing it into being than is the Yellowtail project. It is an investment of vast potential worth, and one in which America has already invested over $5 million. Each year that sees the uncontrolled waters of the Big Horn wasting and destroying their way unharnessed to swell the destroying floods of the lower basin area is a year of agricultural, industrial, power, and soil loss that can never be replaced. Water is a crop, and a crop must be harvested when it is ripe. The water crop ripens with the melting of the mountain snows in the springtime, and must be harvested in the spring and can only be harvested by dams such as the Yellowtail. Not to harvest that crop is a waste of a great resource, given by God to man, to use and enjoy. Not to do this is sacrilege. Let us halt this squandering of this, our greatest resource. Let us aid the Crow people and ourselves. Water and topsoil, like wasted hours, can never be replaced if once permitted to erod and flood away. If the Congress and the President will give the Bureau of Reclamation the $2,500,000 now requested for this project, that Bureau will do the job to the benefit of all America, for the retention of water upstream is one of America's most pressing needs.

GENERAL STATEMENT

Mr. FRASER. I am here in behalf of the Yellowtail Dam project in southeastern Montana. And I would like to say that water is a crop, and like any other crop, must be harvested when the time is right.

Montana's water crop comes from melting snow; it must be harvested during the spring runoff, and can only be harvested by the building of dams such as the Yellowtail project. Not to harvest this water crop whenever possible is a waste of a great national resource, and it can only be done by the building of such projects as Yellowtail Dam.

Now, I would like to urge this committee to approve the President's budget request of $21½ million for the Yellowtail project.

As a young man, I was an archeologist in the Senator's home State, the great State of Arizona. And I spent time in excavating ruins and civilizations which had perished for lack of water. And civilization today can perish just as civilizations in the past perished when their water resources evaporate or dry up.

Dams reach far more territory, area, than is sometimes realized by the public. Our Fort Peck Dam, for instance. A few years ago, during the period of great drought in the Southwest and Louisiana and the Gulf States, the fresh water streams of that area were drying up and receding, and the salt water was aggressing into the areas and threatening the New Orleans water supply system. And with foresight, the New Orleans water people rushed to the phone, so to speak, and called Fort Peck, Mont., and said, "Help."

The waters of the Fort Peck Dam in northern Montana were released, and 3 weeks later when they reached New Orleans, I am told, the salt water was within less than a block of the intakes of the New Orleans water supply. And that one act, I am also told, practically paid for the original cost of the Fort Peck Dam.

I thank you.

Chairman HAYDEN. Thank you.

Mr. Carter Johnson.

BIG HORN DAM PROJECT

STATEMENT OF J. CARTER JOHNSON, ON BEHALF OF THE BILLINGS CHAMBER OF COMMERCE, BILLINGS, MONT.

GENERAL STATEMENT

Mr. JOHNSON. Mr. Chairman, my name is J. Carter Johnson of the Billings (Mont.) Chamber of Commerce. I am appearing before this committee to urge your concurrence in the budgetary request for a $21½ million appropriation to permit construction of Big Horn Dam near Hardin, Mont.

Our delegation today has appeared before you on previous occasions. However, two stanch supporters of this project, E. W. Rising, of Washington, and Roy Cool, of Hardin, because of recent operations, are unable to take part today.

Gentlemen, the sooner this project gets underway, the better we all will be, since hydroelectric energy is getting in short supply. By the time this project is completed, such energy will be in premium demand.

The flood control feature of Big Horn Dam is self-evident. When we as a nation can harness our raging rivers and control them by regulatory streamflow then, and only then, can we avoid the tragic death toll, the untold million of dollars in damage, and the vast loss of topsoil from the very heartland of America.

PROJECT SELF-LIQUIDATING

Now, as a businessman I must recognize what is good and what is bad in the way of investments. Big Horn Dam is, in my opinion, a good investment. The project will be completely self-liquidating. It will help all the people of the United States achieve a most profitable financial investment for the present as well as for future generations of our citizens. It not only will pay for its entire cost with interest, but it will also continue to add to the Nation's income far into the future. It will serve our Nation by providing a major economic uplift to our region as well as by broadening the tax base, thus providing a stable but elastic farm economy in which a man has a choice of crops rather than be confined to a crop in surplus.

Part of my business includes farming. I raise beans and sugar beets on irrigated land. Row crops which can be grown on irrigated lands in the West are not in surplus and there is a growing demand for them. Adequate water supplies are a must for a growing America. Water is especially precious to us in the arid West.

WATER FOR STOCKGROWERS

Big Horn Dam will provide water for stockgrowers to raise winter feed beyond that furnished by the hay in mountain meadows. Thus, stockgrowers can avoid a hazard of nature they have faced throughout the years when rainfall is inadequate to grow hay for winter feeding.

In conclusion, it would seem that to approve an appropriation for the Big Horn Dam would be good judgment, and good business, on the part of this committee.

Thank you.

Chairman HAYDEN. I want to thank you for your clear-cut statement of what, so far as I am concerned, are the facts.

Mr. Ruegamer.

CONSTRUCTION RECOMMENDED

STATEMENT OF HENRY RUEGAMER, OF HARDIN, MONT.

GENERAL STATEMENT

Mr. RUEGAMER. Thank you, Senator.

Last year our committee appeared before your committee. I am Henry Ruegamer, of Hardin, Mont. I would like your permission to introduce a brief and some messages of support for our testimony at the conclusion of my presentation, which is a short brief.

Chairman HAYDEN. That may be done.

Mr. RUEGAMER. I will attach a brief statement, a study recommending construction of theBig Horn Dam.

A few days ago we visited the Bureau of Reclamation in Billings, Mont., and acquired some vital facts concerning the immediate future needs of electric power in the Missouri River Basin.

Secretary Seaton 3 months ago had announced preference customers would be rationed at about 83 percent of their estimated 1963 needs. Obviously there just isn't enough power to go around.

In 1966 the basin area power will be in short supply by about 482,000 kilowatts. The increased need for electric power points to a major problem rapidly developing in this region.

In fiscal year 1950 there were eight Montana REA cooperatives within transmission distance of the proposed Big Horn Dam. They bought about 19 million kilowatt-hours of electric energy from the Federal system. Eight years later these same cooperatives, plus four additional, purchased more than 157 million kilowatt-hours, a tremendous increase of over 800 percent.

The same story of growth could be told in the neighboring Missouri Basin States. These States are deeply concerned with the powerplant and the supply of the Big Horn Dam in solving this situation.

NATURAL DAMSITE

On the Big Horn River we have this huge natural damsite, and potential energy from falling water that now goes to waste. There is need for this hydroelectric energy, and the need is now.

The Big Horn Dam will be a lasting monument of thoughtful, national planning.

Our presentation to you today is a bipartisan one. It has the support of the Governors of all the States in our region. These leaders are deeply aware of the thousands upon thousands of citizens who will benefit from an adequate supply of power and good fresh water, who will be protected from devastating flood, and who will share in the other benefits of this multipurpose project.

You will be praised for your infinite wisdom in approving this $2½ million item in the 1961 budget to construct the Big Horn Dam. By so doing you will have an everlasting record of achievement in behalf of a vast region of the United States.

I thank you, Senator.

PREPARED STATEMENT

I do not have Mr. Risings' statement; it was submitted in the record in the House side. Could that be gotten and put in the record on this side?

Chairman HAYDEN. I am told we have that statement.

Mr. RUEGAMER. Thank you.

(The statements referred to follow:)

STATEMENT OF E. W. RISING

My name is E. W. Rising. I am the representative of the State Water Conservation Board of Montana. This board is charged with the responsibility of coordinating the construction activities of private individuals and the State and Federal agencies in connection with water resource development.

The board urges that your committee recommend the appropriation of the full amount of all Public Works items for Montana in the budget for the fiscal year 1961. We are particularly concerned with the following:

$4,500,000 for construction of power plant at Fort Peck.

$565,000 for the Helena Valley unit for completion of presently planned lateral lining and the continuation of canal lining and drain construction.

This amount is expected to practically complete the unit, where deliveries of water can be made to all the lands to be served.

$2,800,000 for the East Bench unit, Montana. These funds will be used for construction in connection with the relocation of U.S. Highway No. 91 which will parallel the Union Pacific Railroad relocation. These relocations must pre-

cede construction of the main unit facilities and the full amount of the budget estimate is needed for fiscal year 1961.

$2,500,000 for the Yellowtail unit. These funds will be used in awarding contracts to start construction of the Yellowtail Dam. This dam will be a concrete construction approximately 520 feet high and will create a reservoir with a storage capacity of 1,375,000 acre-feet.

About $8 million has already been spent on the Yellowtail unit in engineering and preparation of construction plans, right-of-way, and powerlines. This unit is urgently needed for water storage and power in southeastern Montana.

We thank you for considering our requests, Mr. Chairman.

PREPARED STATEMENTS

Mr. RUEGAMER. Mr. Chairman I would like to have included in the record a statement by Mr. H. W. Bunston of the Reclamation Committee of Hardin, Mont.; a statement by Mr. Albert White of the Billings Building and Construction Trades Council; a statement by Mr. Melvin Seitz, a businessman from Billings; a letter from Governor Hickey of Wyoming; a telegram from Governor Davis of North Dakota; a letter from Governor Herseth of South Dakota; a telegram from Governor Freeman of Minnesota; a letter from Governor Brooks of Nebraska; a telegram from acting Governor Cannon of Montana; and letters from the three banks in Billings all in support of funds for the Yellowtail unit of the Missouri River Basin project.

Chairman HAYDEN. Those will be included in the record.

(The letters and telegrams referred to follow:)

STATEMENT OF H. W. BUNSTON, REPRESENTING CITIZENS RECLAMATION COMMITTEE OF HARDIN, BIG HORN COUNTY, MONT.

Mr. Chairman and members of your committee, I arrived in Hardin in 1913 after graduating from the University of Michigan. At that time they were surveying the Big Horn Canyon, the third largest in the United States.

After private interests failed to attract private capital, the Army Engineers and the Bureau took over.

In 1941 a hearing was held in Billings to secure local views on the revised 308 report. Montana and Wyoming jointly urged a dam above Thermopolis and a high dam near the mouth of the canyon in Montana some 200 miles below.

In 1944 the Congress enacted into law the Missouri development program in which was authorized the Hardin project as the key project of the Yellowstone. All preconstruction work is completed and the land needed from the Crow Indians has been secured.

Some years back a present member of the House Appropriations Committee flew down the Big Horn over the canyon, circled the damsite, and when we arrived in Billings told a reporter, "I have viewed most of the important damsites in the United States, and I tell you, if ever there was a natural, this is it."

Congressman Jensen, the canyou and the damsite are still there, much more important to our area and the Nation than ever before.

Gentlemen, after 47 years of continuous effort, the President has included an item of $2½ million to begin construction. May we anticipate your favorable consideration, and may I thank you for tolerating my many intrusions in behalf of our area during the past 30 years.

STATEMENT OF ALBERT WHITE, BILLINGS BUILDING & CONSTRUCTION TRADES COUNCIL, BILLINGS, MONT.

Mr. Chairman, $2½ million will be a very substantial start for Yellowtail Dam, but it must come now if it is to help in a time when unemployment is growing daily. The people of eastern Montana and northern Wyoming have been hopefully anticipating this dam for many years. To deny them now is

to ignore the pleas, and the hopes and plans of a vast segment of American citizens, including many who are Indians or of Indian descent.

Our Montana Congressmen and Senators, our State officials, and our chambers of commerce, as well as numerous civic clubs and organizations, and our labor organizations for which I speak today, have spent hours of time, thousands of dollars, and have written letters, sent telegrams, and made telephone calls to help toward this coveted goal. All this in a united, nonpartisan, cooperative spirit and effort to secure this worthwhile and vital project.

The area immediately surrounding the proposed damsite is practically worthless without this dam. Irrigation, plus the additional electrical energy generated by the dam, will broaden incomes and provide for new industries in our State where ample room and raw materials are available. While construction jobs for a few years will immediately take up some of the unemployment slack, there will also be created hundreds of permanent jobs not now existent for people, many from other States, for years to come.

Fort Peck Dam, Hungry Horse Dam, and Canyon Ferry Dam are proof that such projects in pioneer States like Montana benefit all people and all types of businesses and industries. Fort Peck Dam alone proved that unemployment could be reduced rapidly. New businesses have been established and thousands have obtained steady jobs where none existed previously. Eastern Montana and northern Wyoming now need a "shot in the arm" to boost sagging business employment. This appropriation will provide that "antitoxin."

Eastern Montana needs this project to increase irrigated lands and electrical energy supply. All energy could be used in Montana; however, any surplus could be quickly absorbed in Wyoming or Nebraska, so the proposed project is truly an investment with merit.

The second largest revenue realized in Montana is from our tourist trade. Yellowtail Dam, with its boating, fishing, and other increased recreation activity, will bring even more tourists into the area.

We can't have fried chicken til we get and hatch the egg; and we can't get new industries or take up the employment slack til we get this project underway. Gentlemen, what we want and need is appropriation of the $2½ million requested in the President's budget.

Thank you.

STATEMENT OF MELVIN SEITZ, BILLINGS, MONT.

Gentlemen, I am Melvin Seitz, a businessman of Billings, Mont., and I am here to represent the business interests of Billings and eastern Montana, requesting your support for funds—$2½ million—to start construction of Yellowtail Dam on the Big Horn River.

The construction of this dam is long overdue, and to proceed with it at this time is very important to the economy of Montana and to the entire Nation. The Bureau of Reclamation estimates that the total cost of the dam construction will be approximately $106 million. This cost or expenditure will be divided approximately one-third for labor, one-third for supplies, and one-third for equipment. Needless to say, labor will be furnished by the local labor market; however, supplies and equipment will be manufactured in the Midwest and the East; therefore, the entire Nation will profit by the construction alone.

However, the great impact to the whole economy will result as new wealth will be created by power, recreational facilities, and new irrigated cropland. We need only to look at many existing irrigated areas in Montana at present to know that similar projects constructed 25, 50, or more years ago are now the stabilizing contributors to our economy. We should not overlook the fact that with our fast-growing population, highly productive irrigated land will be needed in future years to produce food crops such as sugar beets, beans, and livestock feeds which are not in surplus at the present time. Much wheatland will be taken out of production to produce these crops.

Futhermore, we need to conserve the water supply of the Northwest, and by so doing we can produce new sources of electrical power sorely needed for new industrial development there.

As supplements to this statement I am attaching letters from the presidents of banks in our community further supporting the needs for the immediate construction of this dam. I therefore urge you on behalf of business in eastern

Montana to appropriate the $2½ million to immediately start the construction of Yellowtail Dam as requested by President Eisenhower in his 1961 budget.

Thank you.

FIRST NATIONAL BANK,
Billings, Mont., April 6, 1960.

Hon. CLARENCE CANNON,
Chairman, House Appropriations Committee,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN CANNON: I am writing requesting your support for funds to commence construction of Yellowtail Dam on the Big Horn River in Montana.

We at this bank believe it would be beneficial nationally as a flood control measure as evidenced by present flood conditions on rivers to which this is a tributary.

This entire area has long been without a convenient and accessible large body of water for recreational purposes. Yellowtail Dam would be an answer to this problem.

Our soil is very productive, but water is not readily available. Yellowtail Dam would add substantially to this area's agricultural productivity. It would provide much needed additional employment and substantially increase the value of the land under this irrigation project.

We are a State of large area and very few people. Anything that can be done for us to make our State attractive to populations and industry would be a wonderful step toward making Montana more self-sufficient and a stronger link in our chain of 50 States. Yellowtail Dam we believe is such a step and we urge your favorable consideration of it when it comes up for review.

Sincerely,

FRED MARBLE, Jr., *President.*

BILLINGS STATE BANK,
Billings, Mont., April 5, 1960.

Hon. CLARENCE D. CANNON,
Chairman, House Appropriations Committee,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN CANNON: It is my understanding that your committee will soon be conducting hearings on appropriations for the construction of Yellowtail Dam in Montana.

The construction of this dam has been the dream of the citizens of Billings and the surrounding area for the past 50 years and we are in hopes that construction can be started this year.

The construction of this dam means a lot to the entire eastern half of the State of Montana, not only during the construction period but for many years to come.

This dam will accomplish three things:

1. Help control floods.
2. Develop a large irrigated farming area.
3. Provide electrical power for our fast growing cities and make it possible for heavy industry to establish plants in this part of Montana.

Your favorable consideration will be appreciated.

Yours very truly,

O. B. SILVEY, *President.*

SECURITY TRUST AND SAVINGS BANK,
Billings, Mont., April 5, 1960.

Congressman CLARENCE D. CANNON,
House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN CANNON: I have been a resident of Montana for 52 years and during this period I do not know of any development that has been as important to eastern Montana as the construction of the Yellowtail Dam will be. We hope that when your committee meets in the near future to conduct hearings on public works appropriations that this project will receive your favorable consideration.

There are several reasons why this dam should be constructed. Of course, these have been presented to you, but in my opinion one of the most important

ones is flood control. When you take into consideration the terrible floods they are now having along the Missouri River through Iowa, Nebraska, and Missouri, you can readily see where the building of this dam is greatly needed.

The cooperation and support of your committee of the $2½ million as requested by President Eisenhower in his 1961 budget will be greatly appreciated.

Yours very truly,

R. M. WATERS, *President.*

WYOMING EXECUTIVE DEPARTMENT,
Cheyenne, April 5, 1960.

HENRY S. RUEGAMER,
Chairman, Citizen Reclamation Committee,
Hardin, Mont.

DEAR MR. RUEGAMER: This will acknowledge receipt of your letter of April 2 and the copy of the brief presented in support of the construction of Yellowtail Dam.

I am just completing my statement on the Upper Colorado River Basin project for the April 11 hearings and will append a paragraph expressing Wyoming's support of the Yellowtail Dam project.

This direct testimony will, I think, be more effective and I hope it meets your approval.

Sincerely yours,

J. J. "JOE" HICKEY, *Governor.*

BISMARCK, N. DAK., VIA HARDIN, MONT., *April 8, 1960.*

HENRY S. RUEGAMER,
Care of Hon. Leroy Anderson, House of Representatives,
Washington, D.C.:

North Dakota favors the immediate construction of Yellowtail Dam and urges that the estimate contained in the President's budget be sustained. The electric power and subsequent revenues are much needed for developing the Missouri Basin. Reclamation in the upper Missouri Basin is lagging and will be enhanced through this project.

JOHN E. DAVIS,
Governor of North Dakota.

SOUTH DAKOTA,
OFFICE OF THE GOVERNOR,
Pierre, April 5, 1960.

Mr. HENRY S. RUEGAMER,
Hardin Auto Co.,
Hardin, Mont.

DEAR MR. RUEGAMER: I am pleased to know that Yellowtail Dam on the Big Horn River in Montana has again reached the stage when construction funds are being requested in the current budget request to Congress. It is always heartening to have another project of the Missouri River development come closer to realization, especially when such a project provides for the much-needed power supplies and for irrigation which has lagged so far behind other phases of the basin's development.

I heartily support the construction of Yellowtail Dam and the appropriation requests now before the Congress.

You may use this letter, if you wish, as part of your testimony before the Appropriations Committees.

Sincerely,

RALPH HERSETH, *Governor.*

ST. PAUL, MINN., VIA HARDIN, MONT., *April 8, 1960.*

HENRY S. RUEGAMER,
Chairman, Citizen Reclamation Committee, Care of Hon. LeRoy Anderson, House of Representatives, Washington, D.C.:

The State of Minnesota joins you in urging favorable consideration of the $2½ million item in the Federal budget for construction of the Yellowtail Dam. Best wishes for a most successful hearing.

GOV. ORVILLE L. FREEMAN.

LINCOLN, *April 6, 1960.*

Mr. HENRY S. RUEGAMER,
Chairman, Citizen Reclamation Committee,
Hardin, Mont.

DEAR MR. RUEGAMER: I have your letter of April 2, 1960, with which you transmitted a copy of a brochure relative to the Yellowtail Dam and the associated Hardin irrigation unit, and requested that I support a request for construction funds for the unit in the appropriations bill now before the House Committee on Appropriations.

I feel very strongly that all of the economically feasible units of the Missouri Basin project should be placed under construction and carried to completion in an orderly manner as fast as possible. The Yellowtail Dam and Hardin unit have my full endorsement and you may use this letter before the Appropriations Committees of the Congress in support of an appropriation of adequate funds for construction of the Yellowtail Dam during the next fiscal year.

Sincerely,

(Signed) RALPH G. BROOKS,
Governor, State of Nebraska.

HELENA, MONT.

Hon. LEROY ANDERSON,
House Office Building, Washington, D.C.:

Kindly convey to Hon. Clarence Cannon, chairman of House Appropriations Committee, the following message: I respectfully urge your committee to appropriate full $2,500,000 requested in President's budget for initial construction costs of Yellowtail Dam situated in Big Horn County. Development of this natural damsite will aid Yellowstone River Valley in particular by furnishing electrical energy for industrial uses and by aiding in alleviating unemployment. I can assure your committee that the people of Montana and our State government stand solidly behind the program to initiate immediate construction of this project. Your favorable consideration is urgently requested.

PAUL CANNON,
Acting Governor of Montana.

YELLOWSTONE RIVER DEVELOPMENT

STATEMENT OF FRED J. FREDRICKSON, PLANNING COORDINATOR, NORTH DAKOTA STATE WATER CONSERVATION COMMISSION

GENERAL STATEMENT

Chairman HAYDEN. Thank you.

Mr. Fredrickson.

Mr. FREDRICKSON. Mr. Chairman, my name is Fred J. Fredrickson. My home is in Valley City, N. Dak., where I have lived for almost 50 years. I represent the North Dakota State Water Conservation Commission, the official State agency having the power, authority, and general jurisdiction to control, regulate, and develop the water resources of my State, and to prescribe the uses thereof.

The Yellowstone River is a principal western tributary of the Great Muddy, the Missouri River, the confluence of which is in North Dakota. As one of the signatory States to the Yellowstone River compact, approved October 30, 1951, Public Law 231, 82d Congress, for the fair and equitable division and apportionment of the waters thereof, North Dakota is in full accord with the proposed, authorized development in Montana of the potential benefits of the Yellowstone River, including the construction of the Yellowtail Dam, and related facilities, within the purview of the provisions of said compact.

YELLOWTAIL UNIT

I am duly authorized and directed by the Honorable John E. Davis, Governor of the State of North Dakota, to assist the Montana delegation and interests in every possible way in their efforts to obtain approval of the budget estimate of $2.5 million for initiating construction of the Yellowtail unit in fiscal year 1961. North Dakota is vitally interested in the planned hydroelectric power from this dam, and also in the regulated flow of the Yellowstone River which the reservoir will provide.

It is my pleasure, therefore, on behalf of the State and agency which I represent, to support the appropriation by Congress of the full budget estimate of $2½ million for starting construction on the Yellowtail Dam, and facilities related thereto, during the ensuing fiscal year.

I respectfully solicit the approval and recommendation of your honorable committee to that end.

Thank you for enabling me to make this presentation.

Chairman HAYDEN. Thank you for appearing.

Mr. Hawkins.

STATEMENT OF WILLIAM W. HAWKINS, DILLON, MONT., ON BEHALF OF EAST BENCH UNIT, AND SOUTHWESTERN MONTANA STOCKROADS ASSOCIATION

PREPARED STATEMENT

Mr. HAWKINS. Mr. Chairman, my name is William W. Hawkins. I am from Dillon, Mont. I represent the East Bench unit, and I also represent the Southwestern Montana Stockroads Association.

I have a statement here, and I would like permission to put it in the record.

Chairman HAYDEN. We will be glad to do that.

(The statement referred to follows:)

STATEMENT OF WILLIAM W. HAWKINS, DILLON, MONT., EAST BENCH UNIT

	Acres
Supplemental water supply for	28,004
New water supply for	21,800
Total, unit	49,804

Detail investigations started in 1947.

Total cost of work to date, about $1,176,000.

Definite plan report approved September 1956.

Local committee started organizing December 1955.

Clark Canyon Water Supply Co. formed April 1956.

East Bench Irrigation District, October 1957.

Repayment contracts executed for Clark Canyon Water Supply Co. and East Bench Irrigation District by United States on October 8, 1958.

Senate bill S. 977, modifying acreage ownership limitation for East Bench unit passed by 85th Congress and act signed by President on July 24, 1957, becoming Public Law 85–112.

The economy of the Beaverhead Valley of southwestern Montana rests primarily on agriculture, chiefly ranching which does not benefit from any Government support program. A steady supply of water is vital, not only for the cattle and sheep, but also for production of hay and grain to carry them through the winter. There are about 95,000 head of cattle and 85,000 head of sheep in Beaverhead County.

We have plenty of water in our area. The problem is to control it—to store it during the winter and early spring when the snow melts and hold it for use during the dry summers.

With practically no regulation of streamflow at present, the snow melts rapidly when it turns warm early as it did this year, and the water we need to irrigate our hay meadows floods the valley in the spring and is gone usually by late in April. This year it is practically gone now.

The East Bench unit would stabilize the basic industry of our area by assuring a dependable, year-round supply of water. It would not contribute to surplus agricultural products—since all the hay and grain produced on the irrigated areas are consumed by livestock.

In the State of Montana, only 2 percent of the gross land area, or about 13 percent of all the cropland, is irrigated. During drought years, it is estimated that this irrigated 13 percent produces nearly two-thirds of our crops. This demonstrates the stabilizing effect of irrigation and also supports the need for increasing the irrigated acreage wherever possible. Development of the East Bench unit will place our area in a position to assist in meeting the demands for food and fiber imposed by a national population increasing at the rate of 3 million a year.

Another major industry, mining, continues in a depression, causing unemployment in the area to reach a new high. As you may know, Montana ranks second among the States in the rate of unemployment—the jobless as a percentage of those in covered employment.

As of March 19, 1960, the rate of unemployment in Montana was 12.7 percent, second only to Alaska, with a high of 16.4 percent. Unemployment in neighboring Idaho also was significantly above the national average at that time. The national average was 5.8 percent. The figure in Idaho on March 19 was 7.7 percent.

As Mr. DeMar Taylor and Congressman Metcalf emphasized in testimony before this committee last year, time is of the essence. Carrying this project forward rapidly will save some $2 million in construction costs, or about 10 percent of the total cost of the project. You will recall that the Montana State Highway Department planned to route a part of the new defense highway through what is to become the reservoir area. At the request of people locally, the Department delayed this project to give us time to go ahead in support of the East Bench unit. Relocation of that highway, once built, would add at least $2 million to the cost of the project.

Prospective water users have contracted to repay appropriate shares of the construction costs for this unit and have diligently pursued and accomplished every requirement of the Government as a preliminary to start of construction. They have done everything possible. From previous testimony, you know of the strong local and State support for this needed development. Statements include those from the Beaverhead Chamber of Commerce, our Governor and State water conservation board. It is our hope, Mr. Chairman, that this committee will continue this investment which means so much to the people of our area.

SURPLUSES

Mr. HAWKINS. Mr. Chairman, there are just a few things that come up on anything of this kind. About the first one is surpluses, what do you want to have more irrigation for when you have got a surplus?

Well, we live in the mountains. We live on the furthest west branch of the Missouri River. Our busines is primarily a livestock business. We have got right close to 100,000 head of cattle and 86,000 head of sheep in our county. Of course there is a fair-sized county. We have 5,000 square miles. But every winter is a hard winter with us. We don't live down on the foothills.

Our feeding period, our average feeding period, is 5 months. And take a year like this, well, we have more supplies this year than we have had in a long while. Along in November it really cooled off, and that was a little early. It dropped down around 50 below zero. And that was just about 40 days before we usually feed.

Of course, the natives around there say, "Oh, it doesn't make any difference, it doesn't affect us, it's a dry cold." But they are going to run around there for quite a while with slush ice in their bladders whether they are natives or not.

But that additional 40 days' feed for this amount of livestock when—well, it's a "wonder country"; you wonder when winter is going to start and you wonder whether you have got hay enough, and you just keep wondering all the time. But like this winter, that additional 40 days for 100,000 head of cattle, and 85,000 head of sheep, why you have a pretty hard time convincing any of the natives out there that we have got a surplus. They are trading hay, they are hauling hay, they are going up and down. And we are not producing—we do raise a little grain on the lower end of this project.

The upper end of this project is about 6,000 feet high, and the lower end is about 5,000. Now, the 6,000-foot end of it, their frost-free days are only about 80. And we have one fellow in our valley that has made a success of raising seed potatoes, because they don't have to get ripe, they don't have to be big, he specializes in it. But we can't raise row crops or anything of that kind.

Then our high water is peculiar. It doesn't come primarily in the spring. We have a bigger area—these big high mountain valleys just surround us all around, and they are irrigated valleys, they irrigate and raise this hay there.

Well, when they start irrigating there about the 1st of June, they just saturate that whole upper end of the valley. Well, along about the 1st of October, that water begins to rush down in the lower reach there, down in the lower end of it, and our river—we have plenty of water, if we could just distribute it rightly—and that will run back for all winter long from this return flow of this irrigation up above, and then about the 1st of April it is all out. Then we have a runoff—now, we had the earlier runoff that we have ever had any record of this year.

Now, while you were having quite cold weather here, it turned warm, it got about 60, and the snow went off clear to the top of the mountains. Well, that is good, it went down the creek, we are through with it.

And I will say this, I don't think there is anywhere where people have been as unanimous on this thing—I won't say the town people are that—but the people that were actually concerned, the people that were affected—we had on the east bench a 91-percent signup, and that was 97 percent of the land.

PROPERTY AFFECTED

Now, primarily, when we started this thing we didn't go into it with the idea of putting this new land in, we wanted—well, we wanted to try and take care of ourselves on our supplemental water. There is about 28,000 acres that will get supplemental water, and there is 25,000 acres of new land.

Well, when we got into the thing, we had a wonderful damsite, it looked like we could muzzle it ourselves. We went out and drilled it and the bedrock was stepped up, and we couldn't use that. And we had to move up, and we finally got into a situation where we had to move the town of Armstrong, we had to move the railroad, and we had to move the highway.

But this thing has merit. I am sold on it. And I really believe in it. And our people are unanimous in it.

Chairman HAYDEN. That was not true some years ago.

Mr. HAWKINS. No, it was not true. But it wasn't the people that were affected. You have always got a lot of "coffee coolers" standing around on the corner talking about things, they are not affected, but they are the boys that are the "againsters" all the time. But that is what happens. They weren't the boys that were really in the thing in any manner or form.

STORAGE OF WATER

But this water in this winter—well, for 21 years the Reclamation Service has gaged that stream there, and they figure if we can store this winter water that goes down there in the wintertime, this dam is set up for 260,000 acre-feet of water, a hundred-thousand-acre flood control, 160,000 of your gages, and the runoff in the wintertime will supply 160,000 acre-feet. And that goes down the river; we miss it. But our people are good people, and we get by. We get by about 7 years out of 10. Then it wasn't all take. Our people were willing to give.

Now, the people with the water rights down in the valley, we have—out of 67 people that get water there, there are 12 that have never been short of water, they have never been cut off, in the original rights, anything from 79 down to 62—we are an old mining area, the first ditches made from mining, the 79 rights were there, and those people with 79 rights were never cut off. But they were willing to limit themselves to get this thing going, they have believed in it, to 4½ acre-feet—some of these had 10 and 12 acre-feet, but they were willing to give. They said, "We will pool all but 4½ acre-feet of water."

Now, this thing is started, we have got a road crew that is right up there—of course, that is really what put the pressure on us when they started this highway and it had gone right up through the bottom of the dam area, and if they had spent a couple of million dollars on the road we never would have been able to get it down.

But they are right up there, and all we have requested, all, I say, is that we get money to continue this thing and move the railroad, move the highway, and try and get us some water.

I thank you, sir.

Chairman HAYDEN. The State highway department is doing that work?

Mr. HAWKINS. Yes, sir.

The dam people, the Reclamation Service, is to buy the right-of-way, and the highway people are to build the road. We are saving money.

I thank you.

COLORADO RIVER STORAGE PROJECT

Chairman HAYDEN. I have received a letter from Senators Allott and Carroll inclosing statements by Mr. Ival Goslin, chief engineer and secretary of the Upper Colorado River Commission and Mr. Andrew Fletcher of the Florida Water Conservancy District. This letter and the statements will be included in the record.

(The letter and statement referred to follow:)

U. S. SENATE,
COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
April 13, 1960.

Hon. CARL HAYDEN,
Chairman, Senate Committee on Appropriations,
Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed are copies of a statement by Ival Goslin, chief engineer and secretary of the Upper Colorado River Commission, and by Andrew Fletcher of the Florida Water Conservancy District, Durango, Colo., with respect to funds needed for development of the Upper Colorado River storage projects.

We concur completely with the recommendations in these statements and hope that the subcommittee will give them careful consideration and that they be made a part of the hearings on fiscal 1961 public works appropriations bill.

Sincerely yours,

GORDON ALLOTT,
U.S. Senate.
JOHN A. CARROLL,
U.S. Senate.

STATEMENT OF IVAL V. GOSLIN, CHIEF ENGINEER AND SECRETARY, UPPER COLORADO RIVER COMMISSION

My name is Ival V. Goslin. I am the chief engineer and secretary of the Upper Colorado River Commission, Salt Lake City, Utah. The Upper Colorado River Commission is an interstate administrative agency created under the terms of the Upper Colorado River Basin Compact, executed at Sante Fe, N. Mex., on October 11, 1948. The Commission represents the States of Colorado, New Mexico, Utah, and Wyoming in matters pertaining to the water resources of the Upper Colorado River Basin.

BUDGET REQUEST FOR FISCAL 1961

In his budget request to the Congress on January 18, 1960, the President recommended that construction and planning funds be appropriated to the Upper Colorado River Basin fund for the Colorado River storage project and participating projects, as follows:

Continuing work:

Project and location	*Amount recommended*
Glen Canyon storage unit, Arizona-Utah	$35,535,000
Flaming Gorge storage unit, Utah-Wyoming	12,000,000
Navajo storage unit, Colorado-New Mexico	11,776,000
Paonia participating project, Colorado	903,000
Smith Fork participating project, Colorado	1,500,000
Vernal unit of central Utah participating project, Utah	2,189,000
Hammond participating project, New Mexico	1,300,000
Seedskadee participating project, Wyoming	5,000,000
Curecanti storage unit, Colorado	1,400,000
Florida participating project, Colorado	750,000
Funds in other categories:	
Transmission lines division, upper basin States	518,000
Advance planning, upper basin States	938,000
Subtotal to Upper Colorado River Basin fund	73,809,000
Undistributed reduction due to delays and deferrals	−2,209,000
Total to Upper Colorado River Basin fund appropriation	71,600,000

It was anticipated at the time of President Eisenhower's budget request in January that there would be approximately $18 million of carryover funds available for use in 1961 due to the 6 months' labor strike at Glen Canyon Dam during the first half of fiscal 1960. On March 10, 1960, the original budget request for Glen Canyon construction funds was reduced by $8.5 million because the contractor will be unable to accomplish sufficient construction to earn the full sum apportioned in the original budget recommendation to Congress plus the $18 million carryover from fiscal 1960.

In general, the President's budget request, as it now stands, contains recommended sums for construction of the storage units and participating projects that fairly well represent the amounts of work that can be expected to be accomplished in 1961. Therefore, it is requested that the Appropriations Committee report to the House of Representatives a bill that will include the budgeted items for the storage units and participating irrigation projects of the Colorado River storage project, with the exception noted hereinafter.

NEW PROJECT STARTS FOR FISCAL 1961

Included in the fiscal year 1961 proposed reclamation programs are six new construction starts, of which two are located in the Upper Colorado River Basin. These two are: the Curecanti storage unit on the Gunnison River in western Colorado and the Florida participating irrigation project in southwestern Colorado.

The Curecanti storage unit for which an initial construction appropriation of $1,400,000 is requested was authorized by Public Law 485, 84th Congress, 2d session subject to certification by the Secretary of the Interior to the Congress and to the President that it is economically justifiable. Certification to this effect was transmitted to the required parties in the form of an economic justification report in July 1959. As certified the Curecanti unit will consist of two dams, reservoirs, powerplants and other appurtenant works on the Gunnison River. The feasibility of a third dam, reservoir, and powerplant is currently under study.

The primary purposes of the Curecanti unit are the regulation and storage of floodflows of the Gunnison River and the generation of hydroelectric energy. The storage of water will also assist in river regulation in complying with the requirements of the Colorado River compact, and will, by the exchange process, furnish irrigation water supplies for participating irrigation projects in the upper basin. Major benefits will accrue to the area, the State of Colorado and the Nation from recreational facilities that will be provided.

The $1.4 million sought for initiating construction in fiscal 1961 will allow for the preparation of designs and specifications leading to the award of a construction contract for Blue Mesa Dam and Reservoir. Funds are urgently needed in order to make surveys and prepare estimates of costs of relocating U.S. Highway 50 around the reservoir area. Owners of business enterprises and of homes in the area have been in a state of indecision for several years waiting for these plans to be consummated. This has disrupted the economy of the area and, in some instances, has caused hardships to citizens who cannot plan their enterprises in an orderly manner.

The Florida participating project was also authorized by Public Law 485, 84th Congress, 2d session. In order to initiate construction, $750,000 are requested for fiscal 1961. It is anticipated that these funds will be used for collection of design data for Lemon Dam and Reservoir, acquisition of rights-of-way, and the preparation of designs and specifications leading to the award of a construction contract. Investigations will also be continued on the enlargement and rehabilitation of the distribution system.

The primary purpose of this multipurpose project is to provide a supplemental supply of water for 13,720 acres of land now inadequately irrigated, and a full supply to 5,730 acres of new land. There will be additional local and national benefits from flood control, propagation of fish and wildlife, and recreation facilities.

GENERAL INVESTIGATIONS

The amount in the President's budget request, $4,650,000, for the general investigations program of the Bureau of Reclamation is insufficient. For a number of years proponents of a sound reclamation program have advocated an increase in these funds. They recognize that the backbone of the entire program lies in having adequate funds available each year for project investigations. Without investigations and planning there cannot be created a backlog of projects ready at the time they should be constructed. Unnecessary delays, added expenses, insecurity, and lack of employment opportunities result when adequate blueprints are not maintained well in advance of construction. One very effective way to provide for the future requirements of the United States is for Congress to increase the appropriations of funds for general investigations activities.

During the past few years, in the neighborhood of $600,000 to $700,000 have been apportioned to investigating the feasibility of projects in the Upper Colorado River Basin. The appropriation for the overall general investigations program of the Bureau of Reclamation should be increased to such an amount that at least $1 million per year would be available as the share of these funds allotted to the upper basin for this purpose.

In fiscal 1961 the general investigations in the Upper Colorado River Basin should be sharply accelerated. There are many projects in western Colorado for which feasibility reports should be completed at an early date. In fact, one, the Animas-La Plata project in Colorado and New Mexico has already been placed on an accelerated priority schedule and will need additional investigation money if other potential projects in Colorado, New Mexico, Utah, and Wyoming are to be kept on schedule.

In the classification of advance planning there are 5 of the 11 originally authorized participating projects remaining upon which investigations and planning should be completed and definite plan reports prepared as rapidly as possible. These reclamation projects are: The Lyman and La Barge projects in Wyoming, the Emery County project and remaining portions of the central Utah project in Utah, and the silt project in Colorado.

Increases in both general investigations and advance planning moneys could logically be derived from part of the $8.5 million reduction in the budget request for construction of the Glen Canyon Dam and Reservoir.

TRANSMISSION LINES—POWER MARKET AREA

During the past year, intense interest has developed in the problems related to the geographic area in which energy generated by the Colorado River storage project will be sold, the nature, extent, and characteristics of the transmission system for distributing the electrical energy, and whether the transmission lines are to be constructed by the Bureau of Reclamation or by private utilities. Questions have been raised by both preference users' groups and private utilities concerning power rates, the amounts of power and energy that will be for sale, etc., in addition to questions about the potential power market area and transmission lines.

The Upper Colorado River Commission is cognizant of the fact that the establishment of a power market area by the Secretary of the Interior is necessary before final decisions can be rendered regarding related items, such as the type and extent of the transmission system, line locations and costs, transmission voltages, interconnections with transmission systems in adjacent areas, interim rate schedules, allocations of power to consumers, etc. Therefore, the Commission formally adopted a statement of policy, that will provide a basis for an equitable and practicable means of determining a market area and marketing criteria for power to be generated by the powerplants of the Colorado River storage project. The following letter to the Secretary of the Interior contains the policy statement to which reference is made:

UPPER COLORADO RIVER COMMISSION,
Salt Lake City, Utah, March 7, 1960.

Hon. FRED A. SEATON,
Secretary of the Interior,
Washington, D.C.

DEAR SECRETARY SEATON: At a special meeting held in Salt Lake City, Utah, on February 29 and March 1, 1960, the Upper Colorado River Commission authorized me to submit to you the following statement of policy pertaining to the power market areas for energy to be generated by the Colorado River storage project.

"The Colorado River storage project and participating projects were authorized by the U.S. Congress to be constructed as a comprehensive, basinwide, river regulation, power generation, and reclamation project directly dependent upon the utilization of the water resources of the upper division States of the Colorado River Basin (Public Law 485, 84th Cong., 2d sess.). It is the intent of Public Law 485 that direct benefits from the Colorado River storage project are to accrue primarily to said States of the upper division.

"The Secretary of the Interior is required to operate the water-regulating and power-generating facilities of the Colorado River storage project in an efficient manner and to apportion and distribute the hydroelectric energy in as equitable and fair way as practicable, at the same time maintaining a rapid and efficient

payout schedule for the storage units and participating projects. In performing these functions, the Secretary must comply with the "preference clause" and other applicable portions of reclamation law, including Public Law 485, 84th Congress (70 Stat. 105).

"Initially the indicated net requirements of preference customers in the four upper division States for power from the Colorado River storage project will be substantially less than the generating capability of the powerplants of the Colorado River storage project, but such requirements will equal or exceed the generating capability by 1980.

"In order to operate the powerplants of the Colorado River storage project 'in conjunction with other Federal powerplants, present and potential, so as to produce the greatest practicable amount of power and energy that can be sold at firm power and energy rates' (sec. 7, Public Law 485), it will be necessary to coordinate and integrate the operations of the reservoir and powerplant at Glen Canyon with the operations at Hoover Dam and other lower basin dams.

"The determination by the Secretary of the Interior of the power market area for Colorado River storage project power is an essential prerequisite to final decisions by the Secretary pertaining to load centers, transmission voltages, transmission line locations, power rates, and other power marketing criteria.

"It is the consensus of the Upper Colorado River Commission that at the earliest practicable date the Secretary of the Interior should declare the market area and basic marketing criteria for energy generated by the storage units of the Colorado River storage project in conformity with the following general principles:

I. MARKET AREA

"'(*a*) The primary market area to be defined as those regions within economic transmission distance in the upper division States: Colorado, New Mexico, Utah, and Wyoming.

"'(*b*) The secondary market to be defined as those regions within economic transmission distance within:

1. State of Arizona.
2. Those parts of the States of California and Nevada located within the Colorado River drainage basin.

II. BASIC MARKETING CRITERIA

"'(*a*) Initial preference customer loads in the primary market area to be served to fill 1965 requirements, as determined by the Secretary of the Interior, and subsequently adjusted as defined in II(*d*).

"'(*b*) Predicated upon the understanding that lower basin preference customers in the secondary market area, as defined in I(*b*), have applied to the Secretary of the Interior for substantial blocks of energy from the Colorado River storage project, it is recommended that, prior to the need for this energy by upper basin preference users, preference customer loads in the secondary market area be served to the extent practicable; provided that the Secretary shall not contract for the sale of energy directly or indirectly to a preference customer in the secondary market area for delivery by resale or exchange to a nonpreference customer in the secondary market area.

"'(*c*) Energy in excess of that in paragraphs II(*a*) and II(*b*) to be sold to private utilities in the primary market area.

"'(*d*) At reasonable intervals beginning with January 1, 1964, the Secretary of the Interior shall reappraise the requirements for energy of the preference customers in the primary market area and shall make arrangements to fill their requirements by: first, contracting for the sale of available unsold energy; second, recapturing, after reasonable notice, energy remaining under contract to private utilities in the primary market area, and; third, recapturing, after reasonable notice, energy remaining under contract to preference users in the secondary market area. In recognition of the possibility that in order to be attractive to consumers in the secondary market area, contracts for sales of power may need to include provision for continuing a minimum power supply beyond the recapture period, it is recommended that any such minimum, if deemed necessary, should not exceed 7 percent of project capability and generation during the winter months or 20 percent during the summer months, the winter maximum to be decreased and the summer maximum to be increased as diversity of preference loads between the primary and secondary market areas may indicate.

"'(*e*) Nonfirm energy shall be sold under the same priorities as outlined under II (*a*), (*b*) and (*c*).'

III. ENERGY RATES

"The delivery of all energy generated by, or credited to, the powerplants of the Colorado River storage project shall be at rates that will provide repayment assistance to retire the costs of the Colorado River storage project and participating projects allocated to irrigation in a manner consistent with an orderly and progressive development of the water and land resources of the upper division States in conformity with Public Law 485, 84th Congress, 2d session (70 Stat. 105)."

Engineers of the Department of the Interior are meeting with the Engineering Committee of the Upper Colorado River Commission and the Lower Basin Engineering Group on March 21 and 22 for an initial explanation and discussion of "The Proposed General Principles To Govern, and Operating Criteria for, Glen Canyon Reservoir and Lake Mead During the Glen Canyon Reservoir Filling Period." The designation of the power market areas prior to that joint meeting of the engineers would be of great aid in the understanding of not only the proposed general principles, but also of the overall Colorado River picture including the manner in which the several present and potential reservoirs and powerplants should be operated in order to attain the objective of generating the maximum amount of hydroelectric energy.

Sincerely yours,

IVAL V. GOSLIN,
Chief Engineer and Secretary.

Although the secretary has not yet declared the power market area, it is expected that he will do so at an early date.

The private utilities of the Upper Colorado River Basin States in their Green Book entitled, "Electric Utility Transmission System Study As Related to Colorado River Storage Project, October 1, 1959," and the Upper Basin preference users in their Blue Book entitled, "Federal Transmission System for Colorado River Storage Project As Proposed by Preference Customers, March 1, 1960," propose transmission systems that include certain segments to be constructed by the Bureau of Reclamation. Two of these segments, about which it is assumed there is general agreement, are: (*a*) that portion of the transmission system from Flaming Gorge Dam in Utah eastward to Oak Creek, Colo., and (*b*) that portion from Glen Canyon Dam eastward to Farmington, N. Mex., and Ponca Junction, Colo. The Bureau of Reclamation is currently studying all phases of a transmission system to distribute project power and at the same time meet the requirements of the Colorado River Storage Project Act.

The first generator is expected to be installed in the Flaming Gorge powerplant in June 1963 and in the Glen Canyon powerplant in June 1964. In order to have a means of conveying power as soon as plant operations commence, it appears that construction of some lines should be initiated as soon as possible. In view of the apparent noncontroversial nature of the lines eastward from Flaming Gorge and Glen Canyon cited above, Congress should give serious consideration to increasing the appropriation recommended in the budget request from $518,000 to a sum that will allow the Bureau of Reclamation to proceed at an orderly and economic rate with the construction of power lines from Flaming Gorge to Oak Creek, Colo., and from Glen Canyon to Farmington, N. Mex. Without altering the amount of the President's original budget request for reclamation, funds for these transmission lines could also come from part of the $8.5 million reduction in Glen Canyon storage unit construction appropriation. By this process no more time will be lost, the power market area can be determined, plans and negotiations can be completed, and construction of the transmission system will be accomplished in time to deliver electrical power and energy to load centers as soon as its generation begins.

Thanks, for the opportunity to present this statement on behalf of the Upper Colorado River Commission and its four member States: Colorado, New Mexico, Utah, and Wyoming.

STATEMENT BY ANDREW FLETCHER RELATIVE TO SUPPORT FOR APPROPRIATION FOR FLORIDA PROJECT

I am Andrew Fletcher from Route No. 2, Durango, Colo., where I have lived since 1939. I am one of the directors of the Florida Water Conservancy District, which was formed in 1948. I also have a 160-acre farm in the district. In addition, I have been quite active in grange work and presently hold the office of deputy State master.

The granges of my area are solidly behind this project, as are most farmers in the area. Today, however, I speak for the Florida Water Conservancy District. This district is made up of practically every family living within the watershed, which involves an area roughly 35 miles long and 15 miles wide.

As a resident of the area, I have become quite familiar with the problems of the farmers within the district. One of our major problems is an inadequate supply of water—or no water at all—from the first of July on through the critical growing season of crops on the Florida Mesa.

In 1959 our water supply was cut by the water commissioner on June 15. In most years we have no water to irrigate the second cutting of hay; therefore, our feed supply is usually inadequate for our long winter feeding. Thus, it makes it necessary for us to haul feed long distances, which is expensive.

I have studied the Soil Conservation report on the Florida project and am in complete accord with the recommendations of the report which calls for a dam on the Florida River which would stabilize the economy of farmers under the project.

Under the present irrigation system, we must grow some winter wheat in order to have enough water to irrigate alfalfa and spring grains. If we had an ample supply of water when needed, we could have irrigated pasture for dairy herds and livestock operations in place of surplus grain crops.

With our shortage of water, it is necessary for most of us to secure employment in Durango, which is not good for us or the city of Durango, for we are taking employment away from someone who would live there and increase the population of the area.

There is also the recreational side of the picture under the project. Flood control is also an important factor. At present there is much damage done by the uncontrolled spring runoff of the entire length of the river. A lot of valuable farmland is carried away each year by floodwaters.

The farms under this project have rich land and excellent drainage.

We have worked and prayed for a dam on the Florida River and now that it might be in the making, we are very hopeful that the funds for the project will be approved and that we can soon see our dreams come true. The future of the farmers under the Florida project, to a considerable extent, hinges upon the dam being built.

PACIFIC NORTHWEST UTILITIES CONFERENCE

Chairman HAYDEN. A statement by Mr. Byron Price, representing the Pacific Northwest Utilities Conference Committee will be included in the record.

(The statement referred to follows:)

My name is Byron Price; I am superintendent of the Eugene Water & Electric Board in Eugene, Oreg.; I am appearing here today representing the conference committee as its chairman.

As many of you gentlemen know, the utilities conference committee is an organization composed of publicly owned and investor owned electric utility systems in the Pacific Northwest. The committee was organized in Tacoma in 1947. This committee works with various agencies of the U.S. Government in matters relating to civil defense, national defense, and defense production, as these items are related to electric power.

In addition to these functions the conference committee acts for a major segment of the Northwest electric utility industry as a contact with agencies of Government which are responsible for Federal activities in the fields of production and transmission of electric power. Each year the conference committee reviews the budgets of the Bonneville Power Administration and the

Corps of Engineers and advises Congress of the committee's position on these budgets and various items in them.

This is the 14th consecutive year we have appeared before you. This year, as in the past, we have carefully reviewed the appropriations requests relative to water resource developments in our region and we have met with the administrative and operating staffs of the Bonneville Power Administration and the North Pacific Division of the Corps of Engineers. Each item upon which we will testify today has received our careful study, and this statement which I will present has the unanimous consent of the utilities conference committee.

Before I proceed with my testimony on these appropriations requests I would like to invite to your attention the list (exhibit I) which appears at the end and of this presentation which enumerates the members of the conference committee and contains the total of the number of customers served by the conference committee's members. You will note that the membership includes 25 utility systems, 21 of which are public agencies, 4 of which are private companies. Together these utilities serve 1,352,676 customers, which, in turn, represent about 4 million people. This is in excess of 80 percent of the total population of the area which we serve in Oregon, Washington, and Idaho. The membership of the committee remains the same as during the year 1958–59. The total customers served has increased by approximately 2 percent, which represents to some degree the growth of the region.

Power resources in the load area of the conference committee members are predominantly hydroelectric. This is expected to continue through at least a 10-year period. It is through the combined efforts of the Federal agencies and the non-Federal utilities that we have been able to meet the requirements for power in the Pacific Northwest. During the past year, non-Federal generator installations in the area were increased by nearly 400,000 kilowatts. This, together with the 387,250 kilowatts installed in the Federal system, has kept pace with the load growth and has for the first time in many years resulted in a small reserve of hydroelectric generator facilities. The estimated load growth of the area is expected to rapidly absorb this small reserve. A substantial amount of the non-Federal generators will be installed on the Columbia River and its main tributaries. This will require close coordination in the operation and storage releases from Federal projects as well as the non-Federal. Close hydraulic and electrical coordination is required if the maximum load is to be carried on the combined systems. The existing transmission grid with some additions will provide the means for this coordination through exchange of energy, supply of energy in return for storage service, and wheeling of energy from the non-Federal plants to load centers.

There are a large number of projects under investigation and serious consideration by the utilities of the Pacific Northwest. At the same time there are many obstacles in the path of the actual construction. If we are to meet the regional power requirements it will be necessary that both the Federal and the non-Federal effort be coordinated and carried forward in a planned program.

The committee has reviewed the appropriation requirements for the various multiple-purpose resources projects in the Pacific Northwest. These projects are the ones proposed and under construction by the Corps of Engineers with the power which is generated being marketed by the Bonneville Power Administration. There are a number of projects involved in this year's budget that are very important to the region. Most of the projects have been adequately provided for in the President's budget recommendations to the Congress. However, there are some projects that could usefully use slightly higher appropriations than requested by the President. These increases have been listed in exhibit II.

Green Peter Reservoir, Oreg., is an important flood control and power project. A minimum of $2,500,000 for construction will enable the Corps of Engineers to effectively initiate the relocation and land procurement program. This initial construction phase is most important if an orderly program is to be followed.

The President's budget recommended $41,800,000 for the John Day lock and dam, Oregon and Washington, for fiscal year 1961. As a result of very favorable bidding on the first major construction contract at the project, the division engineer now advises that the amount of $37 million will be adequate to keep the construction of the project on schedule. The revised amount of $37 million

represents the maximum which can be utilized in the fiscal year 1961 from an engineering standpoint. With this in mind and with the assurance that this reduction will in no way delay the power on the line dates or overall completion of the project, this committee recommends the reduced appropriation.

Lower Monumental lock and dam, Washington, is considered an important project in the development of the lower Snake River. This project is the next step upstream from Ice Harbor and is the second of a series of four projects which will ultimately provide slack water navigation to Lewiston, Idaho, and other tremendous production areas of southeastern Washington, northeastern Oregon, and central Idaho. The power produced at the project will be needed at the time of the scheduled completion of the construction. It is good business to carry construction of these Snake River projects to completion as early as possible in order that maximum benefits might be attained.

The importance of recreation facilities at the completed projects, or for that matter for projects under construction, is an essential part of development. It is highly desirable that such facilities be provided in order that the maximum benefits of the project can be attained. Recreation is rapidly becoming an important beneficial use of water resources. It is recommended that the committee give favorable consideration to the increases shown on exhibit II.

There is one additional project in the area which is of amjor significance, and that is Libby Dam on the Kootenai in northwestern Montana. You are aware that this project extends its reservoir into Canada and therefore agreement for its construction must be obtained from our northern neighbor. Fortunately, significant strides have been made in recent months to resolve this matter and their is a good chance that construction of Libby may proceed in the near future. The conference committee recommends that Congress authorize and appropriate $387,000 for advance engineering and design on the Libby project in order that there would be no delay in the planning for this important project.

I would now like to discuss the budget requests of the Bonneville Power Administration. BPA has requested $30,117,000 for fiscal year 1961. The Administrator has said that $19,142,000 of this amount is to be expended for construction and that the balance, $10,975,000, will be spent for operation and maintenance. This total budget is $1,335,000 less than the funds appropriated for 1960. We have studied these items and are in general agreement with BPA's budget requests. The conference committee therefore recommends the total budget request for 1961 in the amount of $30,117,000 for Bonneville Power Administration activities.

At this time I would like to invite your attention to exhibit III which is the "West Group Forecast of Power Loads and Resources for the Period July 1960–June 1971." This report was made by the Pacific Northwest Utilities Conference Committee's Subcommittee on Loads and Resources on January 29, 1960.

In summary, the conference committee, as it has in the past, would like to make it very clear to the Congress that the utility industry of the Northwest does not feel that the Federal Government has the sole responsibility to construct all the power facilities which our region may need. Our requests to the Congress are based on the principle of teamwork. While the Federal Government has an understandable interest in the multiple-purpose development of the Columbia River Basin, this conference committee does feel that the non-Federal agencies of the area should be permitted and encouraged to continue to construct their projects since the basic utility responsibility in the region naturally rests with the electric companies and public agencies which provide direct service to the customer. In meeting this responsibility, these utility agencies have undertaken what is without question the largest hydroelectric construction program in the history of the United States. Currently, and for several years ahead, power for all in our area is in good supply. This results from the construction of power production facilities by non-Federal as well as Federal agencies.

Our request to you is that the Government prosecute construction of the Federal projects in a manner which is consistent with the program undertaken by the regions non-Federal utilities. It is vital that the Congress keep pace with the development program by the construction of certain projects which have been authorized for Federal development. Our request for appropriations to you today is geared to that principle. Expenditures which we recommend will permit the Government to meet the responsibilities which have accrued to it by virtue of its authorization of certain power developments. We earnestly urge this committee to consider our recommendations.

The Columbia River fishery development program, which has been in operation for several years, has the full support of the Pacific Northwest Utilities

Conference Committee. This program is designed to counteract damage to fishery resources in the Lower Columbia River Basin caused by construction of dams. It is carried on cooperatively between the United States and the appropriate agencies in the States of Oregon and Washington. At the same time many of the non-Federal utility agencies of the area have likewise carried on extensive programs to conserve and enhance our fishery resource. The conference committee recommends that the Congress appropriate the sums requested in the President's budget for this program. The amounts requested are $1,915,000 for operation and maintenance and $1,400,000 for new construction. It is our understanding that this program is now approximately 65 percent complete and that the money requirements to complete the program are $8,449,000. It is recommended by the conference committee that this program be continued on schedule and such appropriations be made in future years as are requested.

Again, on behalf of the conference committee and the 4 million people who look to us for electric service, I would like to thank you for the opportunity to appear before you today. As we have demonstrated over the years, the conference committee members are ready and anxious to cooperate with Congress in any and all ways which will promote the best interests of the electric power consumers in the States in which we operate.

EXHIBIT I

Members of Northwest Utilities Conference Committee, Sept. 1, 1959, to Aug. 31, 1960

Name and address	*Customers served*
1. Cascade Locks City Light, Cascade Locks, Oreg	561
2. Central Lincoln Public Utility District, Newport, Oreg	12,114
3. Chelan County Public Utility District, Wenatchee, Wash	16,474
4. Coos-Curry Electric Cooperative, Inc., Coquille, Oreg	5,774
5. Douglas County Public Utility District, Bridgeport, Wash	5,577
6. Eugene Water & Electric Board, Eugene, Oreg	27,378
7. City of Forest Grove, Forest Grove, Oreg	2,838
8. Grant County Public Utility District No. 2, Ephrata, Wash	14,043
9. Grays Harbor County Public Utility District, Aberdeen, Wash	22,068
10. City of McMinnville Water & Light Department, McMinnville Oreg	3,884
11. Milton-Freewater Utilities, Milton-Freewater, Oreg	2,466
12. Pacific Power & Light Co., Portland, Oreg	249,401
13. Portland General Electric Co., Portland, Oreg	249,968
14. Puget Sound Power & Light Co., Seattle, Wash	208,927
15. Seattle City Light, Seattle, Wash	231,367
16. Snohomish County Public Utility District, Everett, Wash	58,237
17. Tacoma City Light, Tacoma, Wash	63,849
18. The Washington Water Power Co., Post Office Drawer 1445, Spokane, Wash	148,390
19. Washington Public Power Supply System, Kennewich, Wash., member systems:	
20. Benton County Public Utility District, Kennewich, Wash	10,054
21. Clallam County Public Utiliay District, Port Angeles, Wash	5,366
22. Ferry County Public Utility District, Republic, Wash	1,237
23. Franklin County Public Utility District, Pasco, Wash	7,137
24. Kittitas County Public Utility District, Ellensburg, Wash	539
25. Klickitat County Public Utilities District, Goldendale, Wash	5,027
Total customers served	1,352,676

EXHIBIT II

Fiscal year 1961 appropriation recommendations, Pacific Northwest Utilities Conference Committee

CORPS OF ENGINEERS CIVIL WORKS PROJECTS

Project	President's budget	Recommendations of the Pacific Northwest Utilities Conference Committee
Advance engineering and design:		
Libby Reservoir, Mont.		[1] $387,000
Little Goose lock and dam, Washington	$550,000	550,000
Lower Granite lock and dam, Washington		500,000
Construction, general (multiple-purpcse projects, including power):		
Cougar Reservoir, Oreg.	12,300,000	12,300,000
Green Peter Reservoir, Oreg.	1,400,000	2,500,000
Hills Creek Reservoir, Oreg.	10,500,000	10,500,000
The Dalles Dam, Oreg. and Wash.	1,900,000	1,900,000
Albeni Falls Reservoir, Idaho	[2] 20,000	[2] 42,000
Chief Joseph Dam, Wash.	300,000	300,000
Ice Harbor lock and dam, Washington	30,000,000	30,000,000
John Day lock and dam, Oregon and Washington	41,800,000	[3] 37,000,000
Lower Monumental lock and dam, Washington		[4] 5,000,000
Lookout Point	[2] 20,000	[2] 42,000
McNary lock and dam	[2] 30,000	[2] 50,000
Columbia River fishery development program:		
Operation and maintenance	1,915,000	1,915,000
Construction	1,400,000	1,400,000

DEPARTMENT OF INTERIOR, BONNEVILLE POWER ADMINISTRATION

Operation and maintenance: New appropriations	$10,975,000	$10,975,000
Construction:		
New appropriations	18,720,000	18,720,000
Carryover from prior fiscal year	422,000	422,000
BPA combined program		30,117,000

[1] Note discussion re this item in testimony.
[2] Recreational facilities at completed projects.
[3] Note discussion of this reduction from President's budget in testimony.
[4] Note discussion re lower Monumental project in testimony.

EXHIBIT III

EXPLANATION OF PROCEDURE AND METHODS USED IN COMPUTING THE WEST GROUP FORECAST OF JANUARY 29, 1960

Area included covers the utilities operating in and supplying the consumer demands for the State of Washington, the northern part of Idaho and the northwest area in the State of Oregon bounded approximately by Pendleton in the east and Bend and Coos Bay in the south. In addition, the Bonneville Power Administration load in the State of Montana is included in the west group loads and the Hungry Horse and Noxon hydroelectric plants located in western Montana are included in the west group resources.

Load estimates are made by each utility of the area or by their principal supplier. No change in these estimates is made by the load resources subcommittee. The total estimated load for the area is the sum of the utility estimates.

Resource estimates include facilities in operation, facilities under construction, proposed Federal facilities authoirzed and for which money has been appropriated to start construction and non-Federal facilities for which license has been issued by the Federal Power Commission. Those projects actively being investigated and in many instances for which application to construct has been made are not included in the computed resources of the area.

Water years on which resources estimates are based are the historical critical year of the area which determines the amount of firm load which can be carried and a median month year which shows the amount of secondary energy available in one-half of the years which can be used to conserve fuel in thermal

plants and to supply interruptible loads (it should be noted that energy shown is not available in equal amounts throughout the year.)

Capability of west group is limited by energy supply and the hydro dependable capacity is in relation to the energy limitations. Energy capability is related to the critical period September 1 to April 15 of the 1936–37 adverse water year. Because of reservoir limitations the firm energy deficiency could not be held at a uniform level during this entire period, and the energy calculations are based on the November through March period during which the maximum level of energy deficiency prevailed. Machine capacity is in excess of dependable capacity and, coupled with secondary resources in the median water year and during the runoff season, can be partially utilized for interruptible load and replacement of fuel generation.

The tabulations include only that interchange with outside parties presently under firm contract although exhibits have been included in the main report to indicate potential interchange with outside parties. Thermal facilities of the west group are considered reserve resources.

Firm peakload growth for the area is at an annual rate of approximately 6.4 percent (energy 5.8 percent) which is slightly above that of the previous forecast.' The initial total peakload level is about 50 megawatts (energy 90 megawatts) below the corresponding year in the previous forecast.

GLEN ELDER UNIT

Chairman HAYDEN. The committee has received numerous communications in opposition to funds for the Glen Elder unit of the Missouri River Basin project. I will include in the record a letter from Mrs. V. R. Schmidt that is representative of a large number of these communications.

(The letter referred to follows:)

SOLOMON VALLEY CITIZEN'S ASSOCIATION,
Beloit, Kans., April 5, 1960.

Senator CARL HAYDEN,
Chairman of the Senate Appropriations Committee,
Washington, D.C.

MR. SENATOR: As a longtime resident of the Solomon Valley I beg of you to give consideration to my protest. My husband's family came to this farm in 1878. It has since been the family home. My husband was born here and has never lived anywhere else. Our land has been flooded many times. Through it all it has been a good place to live .

We both believe that much could be accomplished in the way of flood control by the use of barriers or small dams built along the creeks to slow the flow of water to the river. We are definitely opposed to the Glen Elder Dam. It is wasteful. It is destructive. It would eliminate one of the points of interest in this county, Waconda Springs. Waconda was a gathering point for the plains Indians. There they held their powwows, met with other tribes and worshipped the God of the Great Spirit Springs. It has always been a point of tourist interest, and a geological wonder. Waconda would be covered. A cemetery would also be inundated as well as numerous homes. In the end nothing is accomplished. A terrific debt is piled upon the landowners of the county in the form of taxes. The only land fit for irrigation is in the bottom. The land that least needs the added moisture.

The processing of the land will leave it in fine condition for a drought. A heavy downpour will wash it away, fertilizer will have to be applied to make up for the topsoil removed; and in the end there will not be enough rainfall to insure irrigation.

I am enclosing a copy of Kansas Water News, bimonthly newsletter of Kansas Water Resources Board dated September-October 1959. I quote from page 2 paragraph ("Streamflow")." It is estimated that 43 percent of the mean annual flow in the Kansas River at Bonner Springs originates in area to the west of the unit upstream from Ogden; 27 percent from the Big Blue; 11 percent from Vermillion, Soldier Creek, Stranger Creek, and Wakarusa River, about 7 percent from Delaware River Basin. The remaining 12 percent comes from ungaged areas in the unit."

That includes the Republican, Solomon, Smokey Hill, Saline, and some others

I challenge Mr. Van Pelt's statement about the Solomon River being the cause of any overflow at Kansas City or anywhere else. Also his statement about representing the county commissioners and the Beloit Chamber of Commerce.

He is undoubtly spokesman for some of the businessmen of Beloit. His actions have been secret from the bulk of the people most concerned.

Enclosed please find the copy of the Kansas Water Resources Newsheet.

KATHERINE M. SCHMIDT.

CURECANTI UNIT

Chairman HAYDEN. I will include in the record a letter from Mr. Allen Brown, president of the Colordao River Water Conservation District in support of funds for the Curecanti unit of the Colorado River storage project. Mr. Brown's letter includes a copy of a letter written by Mr. John B. Barnard to the editor of Outdoor Life. Senator Allott had also requested that Mr. Barnard's letter be included in the record.

(The statement referred to follows:)

THE COLORADO RIVER WATER CONSERVATION DISTRICT,
GLENWOOD SPRINGS, COLO., *March 30, 1960.*

Re Curecanti Reservoir, Colo.

To the Honorable Members of the U.S. Senate and to the Honorable Members of the House of Representatives, Washington, D.C.

GENTLEMEN: On behalf of the Colorado River Water Conservation District, a statutory organization comprising 13½ counties in the northwest one-fourth of the State of Colorado, I am enclosing herewith a letter prepared by the Honorable John B. Barnard, Sr., attorney for the district, and a noted authority on water problems in the West, which letter is written in answer to an article which was published in the Outdoor Life magazine in the November 1959 issue in opposition to the construction of the Curecanti Reservoir.

We submit to you that this article is misleading, is contrary to the facts, and that it was written to support preconceived ideas which have no relationship to the necessary development of the West. The author of that article spent less than 2 days in the Gunnison River area. On the other hand, Mr. Barnard was born at Montrose, Colo., prior to the turn of the century and has spent many years in this part of the State and particularly in connection with the study of the development of the State of Colorado and of our water rights.

As shown by Mr. Barnard's letter, the construction of the reservoirs on the Gunnison River will affect less than 12 percent of the 329.5 miles of stream fishing on the Gunnison and its tributaries, and at the same time will multiply many times the recreation benefits derived from boating, water skiing, and other aquatic forms of recreation.

The National Park Service, the U.S. Bureau of Reclamation, the U.S. Forest Service, and the official agencies of the State of Colorado have all given years of careful study and consideration to the questions involved in the construction of these reservoirs and have kept in mind the desirability of increasing recreation as well as production of power, the making of water available to some 150,000 acres of land, and the protection of the lower river valleys from repeated flood damage. Are these tremendous and essential benefits to the State and Nation to be sacrificed for the "1,050 cottontail rabbits," a small number of mule deer, and an unknown change in fish harvest mentioned in sections 61, et seq., of the "Sport Fisheries and Wildlife Report of 1957"?

May we quote briefly from the 1960 Curecanti unit Colorado River storage project, House Document No. 201. The report of the National Park Service, at page 52, states:

"Numerous cold mountain streams will pour into the three proposed reservoirs. Most of these are perennial and not notable fishing streams. Some of the major tributary streams are the Steuben, East and West Elk, Soap, Curecanti, Cimarron, Crystal, Willow, Cebolla, Lake Fork of the Gunnison, and Pine Creek."

Also see page 57, where the Park Service states:

"With due consideration for the many outdoor types of recreational opportunities existing in the Upper Gunnison Basin area, it is believed that there is a definite need for aquatic recreation of the type to be provided by the proposed Curecanti unit reservoirs."

And at page 58:

"It is estimated that approximately 500,000 man-days of general recreation use annually can be contributed to the Curecanti unit reservoirs when recreation developments and facilities adequate to that use have been provided. These 500,000 visitor-days are in addition to estimated present and future visitations to the area without the project."

As you have been advised, Colorado produces approximately 72 percent of the water delivered to the lower basin States at Lee Ferry. Curecanti unit is the only holdover storage project that will directly benefit the State of Colorado.

For these and other legitimate and valid reasons, we urge you to read Mr. Barnard's letter carefully and give it the weight that it deserves coming from one who has had years of actual experience with the Gunnison River, its uses, and its problems.

Very respectfully yours,

THE COLORADO RIVER WATER CONSERVATION DISTRICT,
By A. ALLEN BROWN, *President*.

BARNARD & BARNARD,
Granby, Colo., March 10, 1960.

EDITOR, OUTDOOR LIFE,
New York, N.Y.

DEAR SIR: Perhaps if this letter were being written to our local weekly newspaper, it should be entitled "Letter to the Editor." It is prompted by an article by Ben East, which appears in your November 1959 issue, entitled, on the front page, "Doom of a Great Trout River." The heading at the start of the article reads: "The Gunnison, one of the most famous of U.S. trout streams, is about to die for three nonessential dams." Herein I propose to substitute some specific and pertinent facts for the misinformation contained in this article. Your publication justifiably enjoys a wide circulation; and certainly you, as editor, should be deeply concerned with the factual background, or the lack thereof, for all of the material which you publish.

Does the author of this article actually believe that the Congress would have authorized the advancement of $82,311,000 of Federal funds to construct these dams if they are nonessential? Does he really believe that President Eisenhower, who has been insistent, to the extent of inviting criticism of his policies, that public funds be not expended for nonessential projects or those not essential at this time, would have signed the measure authorizing the construction of the Curecanti project, if the three dams were nonessential? Is he of the opinion that the President's Bureau of the Budget, economy minded as it is, would have included an appropriation of the sum of $1,400,000 in its fiscal year 1961 recommendation to commence construction of these dams if they are nonessential? Does he believe that the Department of the Interior was completely in error when it ascribed and allotted $3,268,000 of these Federal funds to the recreation benefits which will flow from the three nonessential dams? Mr. Editor, answer these questions yourself. Appraise the facts your answers will disclose, and then determine for yourself whether the wailing article to which I refer is based upon facts or upon misinformation, and the sensational fantasies and imaginings of the author, who, I understand, spent less than 2 days in the Gunnison area gathering his data.

I am not unfamiliar with this great trout stream. My first fishing experience on that part of the Gunnison River which is the subject of this article was in 1907, when, as a young lad, I fished with willow flies in a very attractive pool located just a few hundred yards upstream from the situs of the proposed Blue Mesa Dam which will form the largest of the three Curecanti reservoirs. My youthful wanderings then took me along the course of the river from Curecanti Needle upstream about 10 miles. I enjoyed it immensely, even thought that stretch of the stream is a dangerous one to fish, and, in the many years which have passed since that early date, and as time would permit, I have returned to my favorite fishing spot to pursue one of my favorite outdoor sports. I have fished also on many of the miles of the Gunnison and its principal tributaries which will in no wise be affected by the construction of the Curecanti project; and every fishing expedition gave me a thrill. I might add that I also much prefer stream fishing to lake fishing.

The title and subtitle of the article to which I refer, and the test itself are all designed to create the completely false impression that the inundation

of that portion of the Gunnison River which will be flooded by the Curecanti reservoirs means the inevitable doom of a great trout river. This is based upon misinformation of the grossest sort; and I propose herein to tell you why I say that, and to give you the facts which both support my statement and refute those made by the author.

The principal tributaries of the Gunnison River are the East River, Taylor, Ohio Creek, Tomichi Creek, Cochetopa Creek, Cebolla Creek, Quartz Creek, and the Lake Fork. When sportsmen speak of the Gunnison as a "great trout river," they mean not only the stream itself between the situs of the proposed Crystal Dam and Almont, a distance of 67.5 miles, but they also mean, and justifiably so, all of the above named and many minor tributaries. The principal tributaries are all comparatively large streams, and afford as good or better fishing than does the main stem of the Gunnison itself. Many prefer to fish them over the Gunnison. They are far less dangerous to fish than is the part of the main stream which will be affected by the Curecanti project. The combined length of the fishing stream of the Gunnison and the above named principal tributaries is 329.5 miles.

From the Crystal Dam, which will be located 5 miles upstream from the south boundary of the Black Canon National Monument, to the upstream limits of the high water line of the Blue Mesa Reservoir, 8 miles below the city of Gunnison, is a distance of 47.5 miles. Were all of this 47.5 mile stretch of stream available for fishing, which it very definitely is not, then 15 percent of the "great trout river," which is the Gunnison system, would be affected for stream fishermen by the Curecanti project. I really believe that Mr. East and the rest of us who prefer stream fishing to lake fishing could find a mile or two in the remaining 282 miles of the Gunnison River and its principal tributaries in which we could pursue our hobby.

Now, let's arrive at the facts as to the 47.5 miles of the Gunnison River proper which will be inundated by the Curecanti Reservoirs. Let's take the Blue Mesa Reservoir first. Twenty-six miles of the Gunnison will be flooded by the Blue Mesa Reservoir. Of this 26 miles, 15.5 miles of it traverses "posted" areas. Stretches of the stream are "posted" with "no trespassing" signs, primarily to keep ardent fishermen from tramping down hay crops, leaving pasture gates open, and committing other depredations to the disadvantage of ranchers; and it is not publicly open to stream or any other kind of fishermen. This leaves an 11-mile stetch which is, theoretically, available to stream fishermen. But is it? Look at the pictures of Don Benson, standing on a huge rock, on page 45 of your issue. You will note that the right bank of the river consists almost entirely of precipitous cliffs, down which only the most hardy soul will venture to pursue the wily rainbow or any other kind of game fish or animal. It is my estimate that, of the 11 miles of unposted stream above the Blue Mesa Dam, fully 40 percent is inaccessible to fishermen because of the presence of these cliffs. This leaves only 6.6 miles of open stream above Blue Mesa Dam for stream fishing, out of the above total of 329.5 miles of fishing stream in the Gunnison River and its principal tributaries. Do these facts paint for you a picture of the "doom of a great trout river"?

It is 15 miles from the situs of the proposed Morrow Point Dam to the Blue Mesa Dam. This portion of the stream will be inundated by the proposed Morrow Point Reservoir. Here the river traverses the Black Canyon. Only one bank of the stream through the Black Canyon is or ever can be accessible or available to stream fishermen; the towering cliffs of the Black Canyon effectively keep them off the other bank. Here, except in low water periods, the Gunnison is a raging, swift-flowing, turbulent stream. One may fish only in a very few places along one side, where pools are formed, and the water becomes sufficiently quiet so that a fisherman can even keep his line in the water; and only hardy and skilled mountain men should even attempt to fish it.

It is 6 miles from the situs of the proposed Crystal Dam to the Morrow Point Dam. This stretch of the stream also will be flooded when the Crystal Reservoir is filled with water. No part of the stream here is now accessible to fishermen. The abandoned D. & R.G. Railroad emerges from the Black Canyon immediately below the situs of the Morrow Point Dam. From the point of such emergence to the Crystal Dam, the river flows through a portion of the Black Canyon which it is impossible for fishermen to enter or traverse. Parenthetically, when the Crystal Reservoir is filled, not only fishermen but gentle souls who prefer to observe scenic wonders the easy way may, by boat, traverse this presently inaccessible portion of the Black Canyon, and enjoy

what I consider to be about the most spectacular and breathtaking scenic wonders on the face of the earth. They cannot see or enjoy them now.

It is my understanding that the regulation of the flow of the Colorado River by Hoover Dam and Lake Meade has made that portion of the stream below the dam an acceptable fishing area, whereas that was not true prior to the construction of that project. With the Gunnison River regulated by the Curecanti Dams, and in view of the fact that present operation plans provide for the bypassing, at Crystal Dam, of a substantial and regulated flow of water, it is only logical to assume that the Gunnison River below Crystal Dam will become a "great trout stream." At present it is not, being populated almost entirely by "rough fish."

I again refer you to the pictures illustrating the author's article. Note the one at the lower left on page 46. Would you care to attempt to fish this stretch of the stream? The portion of the river immediately above Crystal Dam resembles that which is shown in the picture. However, the cliffs on each side of the stream in that stretch of the river tower probably 10 times as high as the hills shown on each side of the stream in this picture; they do not slope gently; they plunge almost perpendicularly for an up-and-down distance of close to one-half mile. Would you care to fish that part of the Gunnison?

I am a confirmed and lifelong devotee to the sport of stream fishing as contrasted to lake fishing. When the three Curecanti Reservoirs are filled, I plan only slightly to alter my previous fishing procedures when I go to the Gunnison River. I propose to find a mile or two of the 282 miles of the river which will not be affected by any of these reservoirs. And I will there pursue my fishing activities as ardently, and, I am sure, as successfully, as I did when I fished at Sapinero. At the close of my fishing day, I will return to one of the recreational areas which the Government plans to be established along the perimeter of the Blue Mesa Reservoir; and there will be several of them upon its 95 miles of high water line. There I will fry my fish in my trailer house which will be lighted with electricity generated at the Blue Mesa powerplant, and heated from the same source. If daylight hours remain, I will take my grandchildren and make a boat trip out over the vast expanse of the Blue Mesa Reservoir, which I think will be one of the most beautiful bodies of water in America. And I think my evening rest will be disturbed very little by the fact that I cannot any longer fish on 47.5 miles of the Gunnison River, most of which I couldn't fish anyway, and if I am at all disturbed by the fact, I will console myself by remembering that 282 miles of that stream still remain to me and all other fishermen, who, like me, prefer stream fishing to lake fishing.

Please bear in mind that not all people who come to Colorado for their vacations, and the number is increasing tremendously year by year, come here to enjoy stream fishing. Many who visit Colorado like boating, swimming, water skiing, lake trolling, and other similar sports which now are denied them in the Gunnison Basin. Are we to sacrifice their pleasures and enjoyments for those of the very meager few who would like to see the Gunnison River remain as it is?

Let us look at the economy of the Gunnison Basin area. I live in Grand County immediately below Granby Reservoir, a manmade lake which is a part of the Colorado-Big Thompson project. The Colorado River was at one time equally as good a trout stream as the Gunnison. I know this from experience, having fished both streams for many years. Many miles of the Colorado are now inaccessible for stream fishing because of the presence of Granby Reservoir and the flow of water released therefrom. But I know that the portion of the economy of Grand County which is dependent upon tourists and visitors has tremendously increased since Granby Reservoir was filled, because those who come here find not only stream fishing but a system of lakes of great beauty which they may enjoy in a wide variety of activities. Based on our experience here in Grand County, I predict that for every one fisherman who would visit the Gunnison area to fish in that portion of the Gunnison River which will be affected by the Curecanti project, hundreds will come to enjoy the remaining stream fishing, to pursue their piscatorial activities on the three reservoirs which will be created, to camp in comfort at the recreational areas to be established, to enjoy boating, yachting, water skiing, swimming, and other activities now denied them.

Another phase of the discussion by the author of this article has to do with the necessity for the construction of the Curecanti Dams from the standpoint of the economy and welfare of the immediately affected areas and of the seven Colorado River Basin States. I do not propose to bore you with details of the

Colorado River storage project, of which the Curecanti is one of the primary and necessary units. I shall only give you certain facts for your consideration, and suggest to you that a minimum amount of research on the part of your staff will tell you whether or not they are reasonably accurate.

The construction of the Curecanti Reservoirs will make possible the irrigation, within the Gunnison Basin, of 83,550 acres of land which is now in sagebrush and, so far as production of crops is concerned, completely barren. It will provide supplemental water for 73,300 acres of lands which are presently, but inadequately irrigated. The Gunnison Basin lands involved are devoted primarily to the raising of livestock. The phenomenal increase in the population of America forecasts that the time will soon be here when more beef cattle must be raised if the demands of that population for beef are to be met. In no other way can these lands ever be made productive. I invite you and the author of this article to investigate carefully the accuracy of this and my following statements of fact.

Second, revenue received from the electrical energy to be generated at Curecanti, Flaming Gorge, and Glen Canyon Reservoir will make possible the construction of more than 43 participating projects in western Colorado which, without this power revenue, cannot be constructed, at least within the foreseeable future. These projects are designed to irrigate thousands of acres of presently unirrigated lands, and to provide supplemental water for more thousands of acres which are now inadequately irrigated. Again, forecasting the future, America in 25 or 50 years must depend heavily upon the production of these lands to feed its men, women, and children. Is a dam which creates a reservoir which serves these present and future purposes a nonessential dam?

Industry and municipalities throughout the seven States of the Colorado River Basin, and beyond, are power hungry. The demand so greatly exceeds the supply that many communities cannot be assured of an adequate supply of power past the year 1962. These communities, industries, municipalities, and great cities of the Colorado River Basin are as much entitled to an ample supply of power as are similar entities in the East. Is a dam which includes a powerplant which, in turn, will greatly augment this inadequate power supply a nonessential dam?

I shall not go further in discussing the benefits which will accrue to the Gunnison Basin, western Colorado, the State of Colorado, the seven States of the Colorado River Basin, and in fact, the United States of America, as the result of the construction of the Curecanti project. I merely invite you and those who oppose such construction, including the author of this article, to spend just a little time in further research on the subject.

The author of this article, on his muffled drums, beats a lugubrious requiem presaging the "doom of a great trout river." I think it would be more proper to arrange for an orchestra to play a fanfare announcing the birth of a recreational area and era which men will never see save only for the Curecanti Reservoirs.

Yours very truly,

JOHN B. BARNARD.

GLEN ELDER UNIT

Chairman HAYDEN. A telegram addressed to Senator Schoeppel expressing the opposition of the Solomon Valley Citizens Association to funds for the construction of the Glen Elder unit of the Missouri River Basin project will be included in the record.

(The telegram referred to follows:)

BELOIT, KANS., *April 1, 1960.*

SENATOR ANDREW SCHOEPPEL,
Senate Building, Washington, D.C.:

We, the undersigned taxpayers and landowners, being residents living in the proposed Glen Elder Irrigation District, hereby register our objection to appropriations of money for the Glen Elder Dam Project.

Solomon Valley Citizens Association, Beloit, Kans.; Carson Hansen, Mrs. Olive McKee, Mrs. Ray Ross, Mrs. Kathryn Moxter, Duane L. Ross, Matt Koster, Mrs. Helen Louise Ross, Marjorie Koster, Ray Stein, Mrs. Jean Simmons, Joe Dean Simmons, Mrs. Laura Reidell, August Reidell, Mrs. Jessie Belden, Bert Belden, Glen Pargett, Mrs. Ruth Pargett, Mrs. Paulene Simpson, Everett Simpson, Dave Anderson, Mrs. Dave Anderson, Matt Hake, Mrs. Matt Hake, Charles Munsey, Mrs. Charles Munsey, Paul Heinen, Mrs. Maxine Heinen, Ferd R. Gansel, Hill City, Kans.; Paul Laroque, Mrs. Paul Laroque, Fred Thille, Henry Fueser, Mrs. Henry Fueser, Henry Krier, Al Krier, Chris Pirotte, Larry Heinen, Mrs. Frances Heinen, Mrs. Matt Pahls, Mrs. George Geiser, Dalton Muck, Joe D. Gansel, Earl Engelbert, Mary Frances Engelbert, Irene Palen, Fern Studer, Rose Sheahon, E. B. Sheahon, Phoebe Bockman, John Bockman, Bonnie File, Duane File, Sugagness Heller, Leonard Heller, Bernice Hodler, Rex Hodler, Mary Remus, Kim Remus, Leonard Heller, Telva File, Earl File, Phillip File, Ronald File, Mrs. Fred Hodler, Ann Thiessen, Vernon Thiessen, Agnes Duff, Ben Duff, Inez Ernzen, Nick Ernzen, Coola File, Miles File, Rose Heller, John Heller, William Heller, Ann Madden, V. R. Schmidt, Catherine Schmidt, Leonard Schmidt, Twila Kruse, John B. Kruse, Mrs. Henry Kruse, Carole File, Gordon File, Charlotte File, Kenneth File, Merritt Hull, Marjorie File, Melvin File, Mrs. R. C. Stilly, Mrs. Susan File, Zella Mottesheard, Ralph Mottesheard, Dan G. Wood, Helene K. Wood, Mrs. Manley James, Manley James, Cecil Fransmatthews, Lawrence Fransmatthews, Louise Dooley, Don Dooley, Irene Miller, St. Joseph, Mo.; Ted Miller, St. Joseph, Mo.; Mrs. Will Myers, Nellie Hyde, Josephine Hyde, Mary Stover, Loretta Stover, Mildred Wendell, W. J. Wendell, Kenneth Wendell, Lucille Wendell, B. J. Martin, Sadie Gansel; Solomon Valley Citizens Association, Solomon Rapids, Kans.; Carl Thiessen, John Bunger, Mert Gentlemen, William Thiessen, Stewart Barker, Vincent Engelbert, Elizabeth Engelbert, Emma Thiessen, Dr. Minnie Thiessen, Dr. Louise Thiessen, Ellen M. Davis, W. D. Thiessen; Solomon Valley Citizens Association, Simpson, Kans.: Delores Robertson, James Robertson, Vicki Robertson, Larry Robertson, Betty Vernon, Robert Vernon, Louise McClure, Arthur McClure; Solomon Valley Citizens Association, Asherville, Kans.: Set Wilson, Mrs. Beth Wilson, Tom Hyde, Margaret James, Harry James, Thomas Carlin, Pearl Carlin, Otto Lange, Mary Lange, Boyd Hull, Frank Gentry, Mrs. E. E. Roberts, Gertrude Burnette, Bill Burnette.

PALO VERDE IRRIGATION DISTRICT

Chairman HAYDEN. I will include in the record a statement by Mr. H. D. Underwood, representing the Palo Verde Irrigation District in support of funds for dredging the Colorado River in the Cibola Valley area.

(The statement referred to follows:)

STATEMENT OF H. D. UNDERWOOD, PRESIDENT OF THE BOARD OF TRUSTEES OF THE PALO VERDE IRRIGATION DISTRICT, BLYTHE, CALIF.

Re Bureau of Reclamation appropriation for channelization of the lower Colorado River in the Cibola Valley.

GENTLEMEN: The channelization of the lower Colorado River will be continued with the funds provided by the proposed appropriation bill which is before you today. The work of channelizing the river began several years ago, with the purchase of the dredged Colorado. The first channelization work took place in the Needles to Topock area. This was followed by the channelization of the river to the Davis Dam area. The work in these areas, having been completed, the Bureau of Reclamation now proposes to channelize the river in the Cibola Valley District.

The Cibola Valley lies some 30 miles upstream from the Imperial Dam. When the Laguna Dam, and later the Imperial Dam were built, it was felt by the people in the U.S. Government that the river would aggrade, because of the dropping of the sediment in the river due to the slowing down of the water, before they reached these two dams. The Bureau of Reclamation withdrew from entry most of the lands in the Cibola Valley, that had not yet been patented. The Bureau of Reclamation also purchased a great many of the lands that were then patented. Therefore, most of the lands in the Cibola Valley area now belong to the U.S. Government.

The Palo Verde Irrigation District's outfall drain was adversely affected by the aggradation that took place following the construction of the two dams downstream. With the raising of the outfall at outlet for our drainage waters in the Palo Verde Valley, it became necessary to pump drainage water from our drainage canals, in order to try to keep the water table in our valley at a level where we could farm the land economically. The proposed channelization would remove from our outfall the main body of water of the Colorado River and would thus restore to us an outfall at the level we enjoyed historically. We, therefore, urge that the channelization work be continued and that we be made whole as to our drainage outlet. Any delay in the work of channelizing the Colorado River will adversely affect the farmers of the Palo Verde Valley, because it will necessitate the continued pumping of drainage water, where we should not have to stand that cost, had it not been for the dam's construction downstream.

There are other advantages to the people of the United States, by the continuation of the channelization of the waters of the Colorado River. The Department of Interior, through the Bureau of Reclamation has made every effort to increase the recreational facilities for the people of the Southwest, through the channelization of the river and the improvement of the roads running along the river. There is also a very great saving of vitally needed water by the channelization process. The channelization, as you know eliminates swamps and phreatophitic growth. These two elements do take a great amount of water in the long, meandering course of the present channel of the Colorado River. We most sincerely urge your favorable consideration of the Bureau of Reclamation's request, for the funds to continue the channelization of the lower Colorado River.

Thank you.

H. D. UNDERWOOD.

CALIFORNIA PROJECTS

Chairman HAYDEN. A statement by Representative Harold T. Johnson of the Second District of California will be included in the record.

(The statement referred to follows:)

STATEMENT OF CONGRESSMAN HAROLD T. (BIZZ) JOHNSON, SECOND DISTRICT, CALIFORNIA

Mr. Chairman, I appreciate greatly the opportunity to testify before you, and I recognize that your schedule is extremely crowded. Therefore, I will be as brief as possible.

I might also mention that in anticipation of your extremely busy schedule, several witnesses who came to Washington to testify before the House and Senate Committees on Appropriations discussed this matter with members of your staff. We all appreciate your kind invitation to meet in special session to

hear these people, but they elected to try to lighten your burden by submitting their statements, another courtesy this committee extended to my people. I would like to thank you on their behalf and in my testimony represent these agencies as well.

I believe also that you are fully aware of the position taken in these matters by the California Water Commission and I would like to endorse this proposal. My testimony here today is designed only to expand further on the official position of the State of California, especially as it affects the Second Congressional District.

Much of the water development in California will be within the boundaries of the Second District. That district includes much of the Sierra Nevada range where the winter snows are stored for summer irrigation and also, unfortunately, it is the mother of floods when melts and runoffs are too fast.

Generally, I endorse the proposed budgets for the Bureau of Reclamation. A substantial portion of the budgeted funds going to California will be for the Trinity division of the Central Valley project. This is well underway, and of course, we must keep it going. To outline briefly the Trinity division:

Project	*Budgeted amount*
Trinity Dam	$12,350,000
Whiskeytown Dam	9,765,000
Lewiston diversion	1,013,000
Lewiston fishery facilities	320,000
Clark Creek tunnel	8,109,000
Spring Creek tunnel	7,150,000
Trinity powerplant	4,088,000
Clear Creek powerplant	4,800,000
Spring Creek powerplant	4,020,000
Transmission lines	1,279,000

Except for one omission, I strongly urge the Congress to approve the budget as presented, but I would like to make a comment about the electrical generation and transmission system. The budgeted amounts are sufficient to award contracts for the powerplants and transmission facilities to the existing Keswick switchyard. The amounts also provide for studies leading to the best route for transmission facilities from Keswick to the Tracy load center. I urge that these studies be expedited.

Early last year Secretary Seaton made public a construction schedule for the Trinity power features, and I note that the 1961 budget figures represent a substantial reduction from the Secretary's schedule. In supporting these lesser figures ($14 million instead of $21 million) I wish to go on record that I will strongly advocate an increased appropriation next year so construction can be in accord with the Secretary's announced schedule. Trinity Reservoir is expected to fill in the spring of 1963. It is just plain, ordinary good business to complete the power and transmission facilities to coincide with that event. In this way, repayment of the public investment in this project can be started without delay.

The one omission in the Trinity Division budget I mentioned involves the Cow Creek unit. Negotiations between the Shasta County water agency and the Bureau of Reclamation for a repayment contract on the Cow Creek unit are nearing consumation. For that reason, I urge appropriation of $555,000 for construction contingent on execution of the repayment contracts. With the rapid economic and population growth around the city of Redding, the need for additional water supplies is accelerating.

A somewhat similar situation exists in the area of the western Sacramento Valley which will be served by the Tehama-Colusa canal, a unit of the Sacramento canal system of the Central Valley project. Negotiations leading to repayment contracts are progressing among several additional public districts and the Bureau of Reclamation. I am confident that contracts sufficient to start construction will be executed soon. Additional water from the Trinity River will be available to this area soon and the Sacramento canals should be completed so that the new supply can be used efficiently and effectively. For that reason, I advocate an increase in the budgeted item to $300,000 for contract negotiations and preconstruction activities, contingent on the execution of additional contracts. Distribution must keep pace with storage and power development.

I would also like to endorse other items contained in the budget for the Central Valley project:

Corning canal	$450,000
Corning canal distribution systems	1,143,000
American River Division's El Dorado Irrigation District distribution system	1,600,000

Two other Bureau of Reclamation projects of vital concern to the people I represent are included in the budget, and I would like to speak in their support:

Washoe project: A California-Nevada project which includes construction of Prosser Creek Dam and Reservoir. The $3,137,000 contained in the budget would permit continued construction of the dam, which by year end is scheduled to be more than two-thirds complete.

On this same project, I also support the general investigation outlay proposed for the Bureau next year. Among these studies would be one of those portions of the Washoe project other than the Prosser Dam and Reservoir. This will permit continued coordinated development of the entire project.

Klamath project: Another two-State venture—California and Oregon—this project has $4,868,000 budgeted for installation of much needed pumping plants and completion of laterals. Differences which held up work there for a while have been resolved and this project would improve the operation of the reservoir for the benefit of all concerned.

The third category is loans for small projects.

I would like to voice my general commendation for this program which helps small local agencies to help themselves.

Two Public Law 984 loans budgeted are $2,261,175 for the Georgetown Divide Public Utilities District and $927,000 for the Jackson Valley Irrigation District. Both of these are most worthwhile projects and I commend them to you and urge the budgeted items be retained intact. The recommended appropriations will permit completion of these projects.

The application of Brown's Valley Irrigation District for its Virginia Ranch project was not approved in time for inclusion in the budget. It since has been transmitted to the Congress and has been approved by the Senate Public Works Committee and is pending before the House Public Works Committee. In view of these developments, and the immediate need for irrigation and domestic water supplies in the district, I ask that an appropriation of $4,804,000 be made under the terms of Public Law 984, 84th Congress.

Another district which is in even greater need is the South Sutter Water District, which has applied for a loan of $4,875,000, also under Public Law 984. I am asking that such an appropriation be made contingent, of course, that the application meets the requirement of the law for a 60-day review period by the appropriate committees of Congress.

Gentlemen, I realize this is a considerable request that I am making before you today. Although I am only a freshman in Congress, I also realize your great obligations to the country to see that we live within our means. This is a difficult task to do, especially when there is so great a need for projects. Therefore, I leave this matter in your good judgment and assure you that the consideration you give the projects of the Second Congressional District and the State of California will be greatly appreciated.

Middle Rio Grande Project

Chairman Hayden. Statements by Mr. John Patrick Murphy, executive secretary of the Middle Rio Grande Flood Control Association and Mr. Hubert Ball, chief engineer of the Middle Rio Grande Conservancy District in support of the budget estimate for the middle Rio Grande project will be included in the record.

(The statements referred to follow:)

Statement by John Patrick Murphy, Executive Secretary, Middle Rio Grande Flood Control Association

Mr. Chairman and members of the committee, my name is John Patrick Murphy and I am executive secretary of the Middle Rio Grande Flood Control Association. I have been authorized by the board of directors of the association to appear on behalf of the membership and present their views in support of our middle Rio Grande project in New Mexico as authorized in the Flood Control Acts of 1948 and 1950, Public Law 858, 80th Congress, and Public Law 516, 81st Congress, respectively.

The Bureau of Reclamation has requested $1,729,000 with which to continue its phase of the work program during fiscal year 1961, and this amount has in turn been recommended by the Budget Bureau for appropriation by the Congress. We respectfully request that you do not cut this amount in any way, as this is a bare minimum and the Reclamation Bureau are about to complete their phase of this joint undertaking with the Army engineers.

I would like very much to take this opportunity to commend the Bureau of Reclamation for a job well done and also for their splendid cooperation with the local people and the other Government agencies participating.

In closing, I wish to say in all sincerity that it has been a real pleasure—over the past 10 years—to appear before this committee and plead the cause of our middle Rio Grande project. You have been most courteous and completely understanding. We are grateful and we thank you.

STATEMENT OF HUBERT BALL

Mr. Chairman, members of the committee, my name is Hubert Ball. I live in Albuquerque, N. Mex., and I am chief engineer of the Middle Rio Grande Conservancy District. I am here to support a request made by the Bureau of Reclamation for funds to continue construction on the middle Rio Grande project in New Mexico. The Bureau's request in the amount of $1,729,000 has been approved by the Bureau of the Budget and is the minimum amount of funds required to carry on the project for the next fiscal year.

This appropriation substantially completes that part of the program which is reimbursable by local interests and will also provide sufficient funds for continuation of the channelization and bank protection works of that portion assigned to the Bureau of Reclamation which is now underway on the Cochiti to Rio Puerco floodway unit of the middle Rio Grande project.

I sincerely urge that these amounts be given consideration by your committee and that congressional approval as recommended by the Bureau of the Budget will be provided. Also I wish to thank the chairman and members of this committee for the present and many past courteous hearings you have extended to representatives of the middle Rio Grande project. We have always felt it a privilege to appear before this particular committee and extend to you our most sincere thanks.

NATIONAL WILDLIFE FEDERATION

Chairman HAYDEN. A statement by Mr. Louis S. Clapper representing the National Wildlife Federation will be included in the record.

(The statement referred to follows:)

STATEMENT BY LOUIS S. CLAPPER, ACTING CONSERVATION DIRECTOR, APRIL 22, 1960

NATIONAL WILDLIFE FEDERATION, WASHINGTON, D.C.

Mr. Chairman, the National Wildlife Federation is composed of 50 affiliates in 49 States and the District of Columbia. These affiliates are made up of more than 2 million individual sportsmen-conservationists.

It is a privilege to appear here today to comment upon appropriations for fiscal 1961 for the Bureau of Reclamation, Department of the Interior.

In 1957, the National Wildlife Federation adopted a policy which, in part, reads:

"The federation endorses the principle of preservation of all natural values upon which the national park system was founded. As a matter of policy we stand ready to defend the national parks and monuments against unseeming commercialization or engineering development which would alter or destroy the natural scenic and scientific values for which any particular park or monument was established."

We appear here today, Mr. Chairman, to recommend that favorable consideration be given to granting $3.5 million to the Bureau of Reclamation for the initiation of a barrier protecting Rainbow Bridge National Monument in Utah from waters backed up by the Glen Canyon Dam on the Colorado River. This project is authorized and recommended in the budget.

The invasion of Rainbow Bridge Monument by water from Glen Canyon was pointed out several years ago when the project first was under consideration. Conservationists were assured that the monument would be adequately protected. Now, failure to construct the proposed barrier would be a breach of faith with those who acceded to construction of Glen Canyon Dam only when assured of the protection of the monument.

Ultimate cost of the protective barrier, we understand will be from $15 to $25 million. Such an expenditure has been attacked as both "unreasonable" and "unnecessary." There are people who even contend that water backed into the monument would enhance its beauty and make it more accessible. These allegations are debatable.

Primarily, the National Wildlife Federation is concerned with principles. A dangerous precedent would be established, leading to possible commercial invasions or alteration of other units of the national park system, if funds for this protective barrier are denied. If Rainbow Bridge Monument is brushed aside, how long will it be before other areas are checked off?

What might be termed a "reasonable" figure of money for protection of this great natural wonder is unknown. By dollar values, $25 million is not excessive to many people; to others, any expenditure would be "unreasonable." However, widely recognized assets such as those represented by unique Rainbow Bridge cannot be measured by the dollar value alone. Appreciation by oncoming generations, long after Glen Canyon may have lost its utility, must be considered. Tragically enough, this may be a one-time decision because unique areas cannot be repaired or restored when once altered.

Mr. Chairman, it is the hope of the National Wildlife Federation that Congress and Federal agencies will recognize the immense value of these types of resources to the extent that protection of them shall be an integral part of any project or development. We believe the Congress gave such recognition to the Rainbow Bridge protective plan when the overall project was authorized and it is the obligation of the Congress to follow through with the necessary appropriation.

In conclusion, we would express the hope that the committee will grant the full budget requests of $200,000 in construction funds and $280,000 for the special Missouri River Basin project to the Branch of River Basin Studies, Bureau of Sport Fisheries and Wildlife. This Branch coordinates fish and wildlife plans into those of the construction agencies and performs a most important function. The future of fish and wildlife, increasingly valuable in view of mounting public outdoor recreational demands, depends upon adequate planning in the construction of water development projects.

Thank you for the opportunity of appearing here today.

COMMITTEE RECESS

Chairman HAYDEN. The committee will stand in recess, subject to call of the Chair.

(Whereupon, at 11 a.m., Wednesday, April 13, 1960, the subcommittee recessed, subject to call.)

PUBLIC WORKS APPROPRIATIONS FOR 1961

FRIDAY, APRIL 29, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, chairman of the subcommittee, presiding.

Present: Chairman Hayden.

DEPARTMENT OF THE INTERIOR

BONNEVILLE POWER ADMINISTRATION

STATEMENT OF WILLIAM A. PEARL, ADMINISTRATOR; ACCOMPANIED BY E. D. OSTRANDER, DIRECTOR OF ADMINISTRATIVE MANAGEMENT; AND D. G. WORTH, BUDGET OFFICER

JUSTIFICATION

Chairman HAYDEN. The committee will come to order.

Glad to hear from you, Doctor.

Dr. Pearl, I will include the justifications in the record and you may proceed with your statement.

(The justification follows:)

BONNEVILLE POWER ADMINISTRATION

Construction

Appropriation Act, 1960			$21,450,000
Unobligated balance from prior year			430,124
Total available			21,880,124
Allocated for transfer to "Operation and maintenance" to cover wage increase			−195,000
Less amount placed in budget reserve			−422,000
Net available for obligation			21,263,124
Decreases:			
Construction in progress		$11,925,124	
New construction		8,707,000	
General plant		631,000	
			21,263,124
Increases:			
Construction in progress:			
From budget reserve	$280,000		
From appropriation	11,959,000		
		12,239,000	
New construction:			
From budget reserve	142,000		
From appropriation	5,975,000		
		6,117,000	
General plant		786,000	
			19,142,000
Total program, 1961			19,142,000
Less amount available from prior year budget reserve			−422,000
Total appropriation			18,720,000

Analysis by activities—Construction

Activities	Amount available, 1960	Decreases	Base, 1961	Estimate, 1961	Increases
1. Construction in progress	$11,925,124	$11,925,124		$12,239,000	$12,239,000
2. New construction	8,707,000	8,707,000		6,117,000	6,117,000
3. General plant	631,000	631,000		786,000	786,000
Total program	21,263,124	21,263,124		19,142,000	19,142,000
Less amount financed by carryover of prior year funds	−430,124	−430,124		−422,000	−422,000
Allocated for transfer to operation and maintenance to cover wage increase	195,000	195,000			
Plus amount placed in budget reserve for use in succeeding year	422,000	422,000			
Total appropriation	21,450,000	21,450,000		18,720,000	18,720,000

1961 construction program summary

Item number and facility	Estimated cost	Obligations to June 30, 1958	Obligations, fiscal year 1959	Obligations, fiscal year 1960	Obligations, fiscal year 1961				Obligations required to complete
					Construction in progress	New construction	General plant	Total	
MAJOR GRID									
145. Portland area supervisory control and digital telemetering	$441,000	$6,000		$207,000	$188,000			$188,000	$40,000
146. Automatic load-frequency control system	213,000			110,000	38,000			38,000	65,000
150. System reactive facilities	6,377,000	2,512,000	$1,033,000	1,554,000	374,000	$257,000		631,000	647,000
155. Ice Harbor-Franklin	1,524,000	32,000	111,000	599,000	637,000			637,000	145,000
159. Big Eddy-McLoughlin	6,709,000	47,000		3,213,000	2,694,000			2,694,000	755,000
160. Hills Creek-Oakridge	413,000	15,000		130,000	213,000			213,000	55,000
168. Reston switching station	353,000	19,000		192,000	142,000			142,000	
171. Columbia-Tacoma	6,956,000	2,110,000	2,605,000	1,041,000	905,000			905,000	295,000
174. Longview substation additions	2,211,000	252,000	1,004,000	879,000	76,000			76,000	
175. Cougar-Eugene	2,580,000	527,000	701,000	181,000	430,000			430,000	741,000
180. Rocky Reach-Maple Valley No. 1	14,264,000	853,000	5,540,000	3,891,000	3,278,000			3,278,000	702,000
181. Maple Valley substation	1,590,000	160,000	71,000	630,000	555,000			555,000	174,000
182. Rocky Reach-Maple Valley No. 2	7,388,000					2,748,000		2,748,000	4,640,000
184. Hanna substation additions	244,000	61,000				148,000		148,000	35,000
Subtotal	51,263,000	6,594,000	11,065,000	12,627,000	9,530,000	3,153,000		12,683,000	8,294,000
SEATTLE AREA									
215. Lewis County service	1,695,000	1,435,000	115,000		93,000			93,000	52,000
245. Oroville area service	549,000	72,000	108,000	291,000	78,000			78,000	
246. Mason County service	312,000	57,000		80,000	175,000			175,000	
247. East Wenatchee area service	521,000	20,000				186,000		186,000	315,000
299. Other transmission facilities	859,000	38,000	75,000	397,000	158,000	176,000		334,000	15,000
Subtotal	3,936,000	1,622,000	298,000	768,000	504,000	362,000		866,000	382,000
PORTLAND AREA									
362. Fern Ridge substation	137,000	23,000				66,000		66,000	48,000
363. Hampton Butte substation	158,000	2,000				72,000		72,000	84,000
372. Lexington area service	695,000	95,000		412,000	125,000			125,000	63,000
378. Gold Beach substation additions	160,000	25,000				66,000		66,000	69,000
399. Other transmission facilities	1,284,000	176,000	73,000	435,000	110,000	335,000		445,000	155,000
Subtotal	2,434,000	321,000	73,000	847,000	235,000	539,000		774,000	419,000

1961 construction program summary—Continued

Item number and facility	Estimated cost	Obligations to June 30, 1958	Obligations, fiscal year 1959	Obligations, fiscal year 1960	Obligations, fiscal year 1961				Obligations required to complete
					Construction in progress	New construction	General plant	Total	
SPOKANE AREA (UPPER PORTION)									
699. Other transmission facilities (subtotal)	$376,000	$2,000	$35,000	$162,000	$14,000	$138,000	----------	$152,000	$25,000
SPOKANE AREA (LOWER PORTION)									
720. North-central Oregon service	1,382,000	17,000	----------	388,000	803,000	----------	----------	803,000	174,000
721. Harney Electric Cooperative service	2,554,000	74,000	----------	1,055,000	1,052,000	----------	----------	1,052,000	373,000
799. Other transmission facilities	416,000	----------	26,000	151,000	----------	206,000	----------	206,000	33,000
Subtotal	4,352,000	91,000	26,000	1,594,000	1,855,000	206,000	----------	2,061,000	580,000
GENERAL SYSTEM FACILITIES									
810. General structures and improvements	3,618,000	30,000	152,000	862,000	365,000	554,000	----------	919,000	1,655,000
820. Communication facilities	1,991,000	421,000	388,000	663,000	137,000	165,000	----------	302,000	217,000
830. Tools and equipment	1,813,000	----------	396,000	631,000	----------	----------	$786,000	786,000	----------
840. Preliminary engineering studies	554,000	----------	204,000	150,000	----------	200,000	----------	200,000	----------
Subtotal	7,976,000	451,000	1,140,000	2,306,000	502,000	919,000	786,000	2,207,000	1,872,000
SYSTEM ELECTRICAL FACILITIES									
871. Transformer additions	3,467,000	1,156,000	1,047,000	810,000	31,000	199,000	----------	230,000	224,000
880. Circuit breaker replacements	2,610,000	672,000	447,000	399,000	90,000	601,000	----------	691,000	401,000
Subtotal	6,077,000	1,828,000	1,494,000	1,209,000	121,000	800,000	----------	921,000	625,000
Items completed in current year	14,105,000	10,677,000	1,993,000	1,435,000	----------	----------	----------	----------	----------
Use of materials from system and other savings	−263,000	454,000	----------	−195,000	−522,000	----------	----------	−522,000	----------
Completion of prior year programs	5,670,000	703,000	4,457,000	510,000	----------	----------	----------	----------	----------
Total construction program	95,926,000	22,743,000	20,581,000	21,263,000	12,239,000	6,117,000	786,000	19,142,000	12,197,000
Balance brought forward from prior fiscal year	----------	----------	−77,000	−430,000	−280,000	−142,000	----------	−422,000	----------
Transfer to operation and maintenance	----------	----------	----------	195,000	----------	----------	----------	----------	----------
Balance carried forward to succeeding fiscal year	----------	77,000	430,000	422,000	----------	----------	----------	----------	----------
Appropriation or estimate	95,926,000	22,820,000	20,934,000	21,450,000	11,959,000	5,975,000	786,000	18,720,000	12,197,000

JUSTIFICATION

Construction, $18,720,000

The 1961 construction appropriation estimate of $18,720,000 compares with an appropriation of $21,450,000 in 1960. (See page BP16 for comparative data.)

MAJOR GRID

The 1961 program provides for additional main grid transmission capacity to transmit the output of new Federal generators being placed in operation at The Dalles, Cougar, Hills Creek, and Ice Harbor Dams, and capacity to wheel non-Federal power supplies over the Federal grid from the Priest Rapids and Wanapum projects of the Grant County Public Utility District, the Mayfield project of the Tacoma City Light, the Carmen-Trail Bridge project of the Eugene Water and Electric Board, and the Rocky Reach and Rock Island projects of the Chelan County Public Utility District. Plans for all electrical facilities are related to the construction plans and load estimates of the Northwest utilities, and of Administration-served industries.

CUSTOMER SERVICES

All proposed customer service budget items have been developed jointly by the staffs of the Bonneville Power Administration and its customers. These items, which have been shown to be needed by joint Administration-customer studies, represent that part of the total new facilities which it is the Administration's responsibility to provide under its customer service policy and within the scope of the rates charged by the Administration. Construction by customers of related new subtransmission and distribution facilities necessary to carry the power from Administration points of delivery to ultimate consumers has been agreed upon and scheduled in conjunction with the joint studies. Energization dates proposed for Administration facilities match these customers' schedules for construction of their own facilities.

All proposed items exceed the Administration's standards of minimum feasibility. That is, estimated cumulative revenues from the sale of power through the new facilities during the initial 10-year period of service are more than sufficient to cover total annual costs of the specific facilities. Hence, in addition to meeting the minimum feasibility standard, the estimated revenues are sufficient to contribute to the costs of generation and main grid transmissions.

BASIS FOR COST ESTIMATES

Estimates for the 1961 construction program were prepared using cost levels of the period January to July 1959. It is expected that material and labor costs will, in general, increase slightly over the succeeding 18 months.

MAJOR GRID

Portland area supervisory control and digital telemetering (item 145): Construction in progress, $188,000

This item will provide supervisory control and digital telemetering of the Ross, Troutdale, St. Johns, Alcoa, and Oregon City substations to the Portland dispatching center. Completion of the project is scheduled for July 1961.

$188,000 will be required in fiscal year 1961 for design, purchase of the minor items of equipment, and installation.

Automatic load-frequency control system (item 146): Construction in progress $38,000

This item will provide centralized load-frequency control equipment on the Federal Columbia River power system to control area generation more adequately. The installation of the equipment is scheduled to be completed by August 1961.

$38,000 will be required in fiscal year 1961 for design, purchase of remainder of equipment, and installation.

System reactive facilities (item 150)

Construction in progress	$374,000
New construction	257,000
Total	631,000

Summary.—The addition of reactive capacity to the main transmission grid is a broad, long-range, continuing program which is related to the addition of generating capacity. The 1961 program consists of 252,000 kilovolt-ampere of capacitors in progress, and the starting of new installations, amounting to 100,000 kilovolt-ampere. The latter installations will be completed by the fall of 1962.

FUND REQUIREMENTS

Construction in progress, $374,000

1959 new starts.—$141,000 will be required in fiscal year 1961 to complete the installation of capacitors and accompanying equipment at Snohomish, Cosmopolis, Tonasket, Bell, and Fairmount substations.

1960 new starts.—$233,000 will be required in fiscal year 1961 for completion of design, purchase of minor materials, and installation of capacitors and associated equipment at Okanogan, St. Johns, and Maple Valley substations.

New construction, $257,000

1961 new starts.—$257,000 will be required in fiscal year 1961 for design and purchase of additional capacitors for the main transmission grid.

Justification.—A continuing program of capacitor additions is necessary to obtain the full salable power output of the Government's generating plants, and to achieve the most economical operation of the transmission network.

Ice Harbor-Franklin (item 155): Construction in progress, $637,000

This item consists of a 9-mile double-circuit 115-kilovolt line, from the Ice Harbor generating plant on the lower Snake River in southeastern Washington to the Administration's Franklin substation, two 115-kilovolt-line terminals at the Franklin substation, and relocation of one 115-kilovolt circuit breaker at Franklin. The switching facilities at Ice Harbor will be supplied by the Corps of Engineers. Completion is scheduled in August 1961.

$637,000 will be required in fiscal year 1961 for completion of surveys and design, purchase of minor materials, and the award of construction contracts for the line and terminals.

Big Eddy-McLoughlin (item 159): Construction in progress, $2,694,000

This item consists of an 80-mile, 345-kilovolt line, between Big Eddy and the Portland General Electric Co.'s McLoughlin substation near Oregon City, Oreg., a 230-kilovolt terminal at Big Eddy substation, and metering and relaying equipment at McLoughlin substation. The line will increase the transmission capacity into the Willamette Valley area from the mid-Columbia generating plants. All but 2 miles of the line will be built on existing right-of-way. The 38-mile Parkdale-Sandy section, which includes the Lolo Pass, will be of double-circuit construction with only one circuit strung. The line will be operated initially at 230 kilovolts.

The Portland General Electric Co. is constructing the McLoughlin substation. Except for metering equipment, the company is furnishing all of the McLoughlin terminal equipment for this line. The company's program includes a 230-kilovolt line north from this station to its Linneman substation and another south to its Bethel substation near Salem, Oreg., where it will connect to the Administration's Santiam-Chemawa 230-kilovolt line. The Pacific Power & Light Co. has constructed a 230-kilovolt line from the Administration's Troutdale substation to Linneman substation. These lines and stations will integrate the Big Eddy-McLoughlin line with the transmission system in the Portland-Salem area. Energization of the Administration's and Portland General Electric Co.'s facilities are scheduled for October 1961.

$2,694,000 will be required in fiscal year 1961 for completion of surveys and design; purchase of minor materials; and the award of construction contracts for the entire line.

Hills Creek-Oakridge (item 160): Construction in progress, $213,000

This item includes a 5-mile 115-kilovolt line, with terminal facilities at Hills Creek and Oakridge substations. Completion of the line is scheduled for September 1961 to coordinate with the Corps of Engineers' Hills Creek generation schedule.

$213,000 will be required in fiscal year 1961 for completion of design, acquisition of land, purchase of disconnect switches, substation steel, conductor, insulators, and miscellaneous materials, and the award of construction contracts for the line and terminals.

Reston switching station (item 168): Construction in progress, $142,000

This item provides for a 230-kilovolt switching station near Reston, Oreg., on the Administration's Alvey-Fairview 230-kilovolt transmission line. Included is telemetering, supervisory control of the Reston switching station from Alvey substation, and the Government's share of the carrier current transfer-trip relaying for the Alvey-Dixonville-Fairview 230-kilovolt line at Fairview substation in order to connect the Administration's system with the California-Oregon Power Co.'s system. The Reston switching station and the relaying at Fairview are scheduled for energization in September 1960, while the supervisory control of Reston from Alvey is scheduled for energization in April 1961.

$142,000 will be required in fiscal year 1961 for minor materials and completion of construction.

Columbia-Tacoma (item 171): Construction in progress, $905,000

This item provides for a 125-mile, 287-kilovolt transmission line from the Columbia end of the Grand Coulee-Columbia line No. 3 via the Covington substation to the Tacoma substation, and a 230-kilovolt, 15-mile line between Covington and Tacoma. The Columbia-Tacoma line will be operated at 230 kilovolts. The project also includes terminal facilities at Covington and Tacoma. Because of restricted right-of-way conditions the Covington-Tacoma section will be of double-circuit construction. The Columbia-Covington section will be terminated at the Covington 230-kilovolt bus in September 1960, and extended to Tacoma in September 1961. The Covington-Tacoma line will be completed also in September 1961. At the same time the Tacoma City Light will energize its 150,000/250,000-kilovolt-ampere, 230–115-kilovolt transformer at the Tacoma substation.

$905,000 is required in fiscal year 1961 for design, award of clearing and construction contracts, and the remainder of the conductor for the Covington-Tacoma line.

Longview substation additions (item 174): Construction in progress, $76,000

This item consists of (1) installation of a 150,000/250,000-kilovolt-ampere, 230/69–13.8-kilovolt transformer bank and related terminal facilities to provide service to the Cowlitz County Public Utility District and the Reynolds Metals Co., and (2) reconnection of two 50,000/83,000-kilovolt-ampere transformer banks, now supplying the district, from 230–69–13.8-kilovolt to 230/115-kilovolt operation, including installation of terminal facilities. Energization of the transformer banks is scheduled by June 1960. Modifications in the 69-kilovolt and 115-kilovolt terminals and the relocation of the 15-kilovolt capacitors will be completed by October 1960.

$76,000 will be required in fiscal year 1961 for completion of installation of the transformers and associated facilities.

Cougar-Eugene (item 175): Construction in progress, $430,000

This item provides for (1) the construction of a 46-mile, 115-kilovolt transmission line, including a line terminal at Cougar Dam, and (2) a 6,000-kilovolt ampere, 115–12.5-kilovolt substation. The westerly terminus will be at the Eugene Water & Electric Board's substation S, near Eugene, Oreg., and the 6,000-kilovolt ampere substation will be located in the vicinity of Blue River, Oreg. An intermediate, 18-mile section of this line from the board's Leaburg generating plant to a point 2 miles west of Blue River was energized in October 1959 to provide temporary 69-kilovolt service at Finn Rock substation to the Lane County Electric Cooperative. Energization of the complete facility at 115 kilovolts is scheduled for October 1962 when the Cougar plant will commence operations. At the same time the Blue River substation will be energized to provide permanent service to the cooperative.

$430,000 is required in fiscal year 1961 for purchase of poles, insulators, crossarms, and conductors; and award of the clearing contract for the Cougar-Blue River and Leaburg-Station S line sections.

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Rocky Reach-Maple Valley No. 1 (item 180): Construction in progress, $3,278,000

This facility consists of the following:

	Scheduled energization	1961 requirements
(1) Rocky Reach-Maple Valley line, 345-kilovolt construction, 230-kilovolt initial operation, 78 miles single-circuit, 51 miles double-circuit towers with 1 circuit strung.	October 1961	$2,619,000
(2) Rocky Reach-Columbia line, 230-kilovolt, 23 miles single-circuit	June 1961	579,000
(3) 230-kilovolt terminal at Columbia substation	do	80,000
Total, budget item 180		3,278,000

Two 230-kilovolt terminals at Rocky Reach will be furnished by the Chelan County Public Utility District, and the Administration is constructing the 230-kilovolt Maple Valley substation (item 181) to serve as the western terminus of the Rocky Reach-valley line.

Maple Valley substation (item 181): Construction in progress, $555,000

This item consists of a major 230-kilovolt substation near Renton, Wash., interchange telemetering additions at Snohomish substation, and supervisory control of the new Maple Valley substation from the Portland dispatching headquarters. Maple Valley substation will include a terminal for the Rocky Reach-Maple Valley transmission line (item 180) and interconnections with the systems of the city of Seattle and the Puget Sound Power & Light Co. Energization is scheduled for October 1961.

$555,000 is required in fiscal year 1961 for completion of design, purchase of minor materials, and the award of a construction contract.

Rocky Reach-Maple Valley No. 2 (item 182): New construction, $2,748,000

Summary.—It is proposed to construct a second 345-kilovolt line approximately 129 miles in length, from the Chelan Public Utility District's Rocky Reach switchyard to the Bonneville Power Administration's Maple Valley substation. The Administration will install a 230-kilovolt terminal at Maple Valley and the district will supply the terminal at its Rocky Reach switchyard. The No. 2 circuit will consist of approximately 78 miles strung on single-circuit towers, and 51 miles strung on the open side of the double-circuit towers being erected as part of the No. 1 line. Both lines will operate at 230 kilovolt until additional transmission capacity is required into the Puget Sound area from the east. Energization is scheduled for October 1963.

Fund requirements.—$2,748,000 will be required in fiscal year 1961 for surveys, design, acquisition of land, purchase of steel and a portion of the conductor and insulators, and award of a contract for stringing that portion of the line that is to utilize the double-circuit towers of line No. 1.

Hanna substation additions (item 184): New construction, $148,000

Summary.—It is proposed to install a 230-kilovolt line terminal with a circuit breaker and to reconnect the 230/115/13.8-kilovolt transformers at the Hanna substation. The California Oregon Power Co. serves this substation by transfer at 115 kilovolts and plans to change the transmission voltage to 230 kilovolts. Energization is scheduled for September 1961.

Fund requirements.—$148,000 is required in fiscal year 1961 for the design; purchase of 230-kilovolt disconnect switches, substation steel, and associated materials; and the award of an installation contract. The circuit breaker is available from the system.

Lewis County service (item 215): Construction in progress $93,000

Work remaining to be performed in this item consists of (1) installing 230-kilovolt metering, totalizing and telemetering of the Tacoma City Light Mayfield hydroelectric plant generation, (2) installing 1.3 miles of control cable between the Administration's Silver Creek substation and the Mayfield plant, and (3) removing and relocating 69-kilovolt lines connected to the Silver Creek substation. Energization is scheduled for September 1961.

$93,000 is required in fiscal year 1961 for survey, design, land acquisition, and purchase of materials.

Oroville area service (item 245): Construction in progress $78,000

The construction of 18 miles of 115-kilovolt line from a tap on the Administration's Okanogan-Tonasket line to the vicinity of Oroville, Wash., and a 6,000-kilovolt-ampere, 115/13.8-kilovolt substation at Oroville will provide service to the Okanogan County Public Utility District. Energization of these facilities is scheduled for September 1960.

$78,000 is required in fiscal year 1961 for purchase of minor materials, and completion of construction.

Mason County service (item 246): Construction in progress, $175,000

This item provides for the construction of: (1) a 3,000-kilovolt-ampere, 115–34.5-kilovolt substation on the Administration's Shelton-Fairmount 115-kilovolt transmission line No. 1 in the vicinity of Potlatch, Wash.; (2) a 1,000-kilovolt-ampere, 115–12.5-kilovolt substation on the same line in the vicinity of Duckabush, Wash.; and (3) 115-kilovolt line sectionalizing switches at each substation. These facilities will serve the Mason County Public Utility District No. 1 and are scheduled for energization in October 1960.

One hundred and seventy-five thousand dollars will be required in fiscal year 1961 for purchase of minor materials, award of construction contracts for the substations, and force account construction of line connections.

East Wenatchee area service (item 247): New construction, $186,000

Summary.—It is proposed to construct approximately 8 miles of 115-kilovolt transmission line from the Bonneville Power Administration's Keokuk substation to the vicinity of East Wenatchee, Wash., and there construct a 20,000/26,667/33,333-kilovolt-ampere, 115–13.8-kilovolt substation with a 13.8-kilovolt feeder position. The substation will be known as Eastmont substation and will serve the Douglas County Public Utility District. Energization of the proposed facilities is scheduled for July 1962.

Fund requirements.—$186,000 is required in fiscal year 1961 for surveys, design, and purchase of the power transformer, substation structures, disconnecting switches, poles, and crossarms.

Other transmission facilities (item 299)

Construction in progress	$158,000
New construction	176,000
Total	334,000

This general item provides for miscellaneous small system additions and improvements in northwestern Washington. The small sums involved do not warrant segregation under separate item numbers.

	Scheduled completion	1961 requirements
WORK UNDERWAY		
(a) Transformer cooling fans, Tacoma substation	September 1961	$33,000
(b) 13.8-kilovolt feeder addition, Royal substation	April 1961	15,000
(c) Precipitron for condenser cooling system, Tacoma substation	March 1961	14,000
(d) Supervisory control additions for Fairmount substation, Olympia substation.	September 1960	4,000
(e) Snow guards, Chief Joseph-Snohomish lines Nos. 1 and 2	do	56,000
(f) Corrosion protection, Port Angeles substation	January 1961	6,000
(g) 115-kilovolt line sectionalizing switches, Pe Ell substation	September 1960	3,000
(h) Capacitor load break disconnect switches, Tacoma substation	June 1961	13,000
(i) Bridge replacements, Covington-Columbia lines Nos. 1 and 2	August 1960	5,000
(j) Access road, Chief Joseph-Snohomish lines Nos. 1 and 2	do	9,000
Subtotal, work underway		158,000
NEW WORK		
(k) Wood-pole replacements	Fiscal year 1961	23,000
(l) Wood-pole structure replacements, Brewster-Okanogan line	do	31,000
(m) Battery charger replacements	do	18,000
(n) Transformer cooling fans, Ephrata substation	September 1961	4,000
(o) Other new work	Fiscal year 1961	100,000
Subtotal, new work		176,000
Total, budget item 299		334,000

PORTLAND AREA

Fern Ridge substation (item 362): New construction, $66,000

Summary.—It is proposed to construct a 3,000-kilovolt-ampere, 115–12.5-kilovolt substation on the Administration's Eugene-Mapleton 115-kilovolt transmission line, approximately 12 miles west of Eugene in the vicinity of Veneta, Oreg., for service to the Lane County Electric Cooperative. This substation is scheduled for energization in September 1961.

Fund requirements.—$66,000 is required in fiscal year 1961 for design, purchase of land and materials, and award of the construction contract.

Hampton Butte substation (item 363): New construction, $72,000

Summary.—It is proposed to construct a 3,000-kilovolt-ampere, 115–14.4/24.9-kilovolt substation on the Administration's Redmond-Burns 115-kilovolt transmission line, approximately 53 miles east of Bend, Oreg., for service to the Central Electric Cooperative. Energization of this substation is scheduled for November 1961 to coincide with the energization date of the Redmond-Burns transmission line. The Administration will not expend funds on the Hampton Butte substation, however, until the cooperative arranges financing for the construction of a new distribution system in this area.

Fund requirements.—$72,000 is required in fiscal year 1961 for design, and purchase of major materials.

Lexington area service (item 372): Construction in progress, $125,000

This facility consists of a 115-kilovolt switching station, with supervisory control, in the vicinity of Lexington, Wash., and 4 miles of single circuit 115-kilovolt transmission line looping the Administration's Longview-Chehalis 115-kilovolt transmission line into the switching station. These facilities will provide an additional point of delivery for the Cowlitz County Public Utility District. Energization is scheduled for September 1961.

$125,000 is required for fiscal year 1961 for purchase of minor materials, and award of construction contracts.

Gold Beach Substation additions (item 378): New construction, $66,000

Summary.—It is proposed to construct a 115-kilovolt terminal position, complete with circuit breaker and metering, in the Administration's Gold Beach substation for service to the Coos-Curry Electric Cooperative. The energization of this terminal position is scheduled for October 1961.

Fund requirements.—$66,000 is required in fiscal year 1961 for design, and purchase of a 115-kilovolt circuit breaker, disconnecting switches, and a steel structure.

Other transmission facilities (item 399)

Construction in progress	$110,000
New construction	335,000
Total	445,000

This general item provides for miscellaneous small system additions in southwestern Washington and western Oregon. Sums involved are small and do not warrant segregation under separate item numbers.

	Scheduled completion	1961 requirements
WORK UNDERWAY		
(a) Bushing tap kits	June 1961	$4,000
(b) Corrosion protection, Alvey and Troutdale substations	December 1960 to February 1961.	37,000
(c) 115-kilovolt line sectionalizing switches, Albany-Eugene line	August 1960	4,000
(d) Annunciator panel and oscillograph, Redmond substation	March 1961	15,000
(e) Control cable replacement, Ross substation	July 1960	5,000
(f) Substation operators training center, Ross substation	February 1961	45,000
Subtotal, work under way		110,000
NEW WORK		
(g) 230-kilovolt circuit breaker, Redmond substation	November 1961	40,000
(h) Wood-pole replacements	Fiscal year 1961	46,000
(i) 115-kilovolt circuit breaker, Bandon substation	November 1961	35,000
(j) Corrosion protection, J. D. Ross substation	March 1961	30,000
(k) 115-kilovolt line sectionalizing switches	July 1961	56,000
(l) Battery charger replacements	Fiscal year 1961	25,000
(m) Disconnect switch grounding blades	August 1961	3,000
(n) Other new work	Fiscal year 1961	100,000
Subtotal, new work		335,000
Total, budget item 399		445,000

SPOKANE AREA—UPPER PORTION

Other transmission facilities (item 699)

Construction in progress	$14,000
New construction	138,000
Total	152,000

This general item provides for miscellaneous small system additions and improvements in northwestern Washington, northern Idaho, and western Montana, which involve small sums and do not warrant segregation under separate item numbers.

	Scheduled completion	1961 requirements
WORK UNDERWAY		
(a) 115-kilovolt line sectionalizing switches, Deer Park substation	August 1960	$9,000
(b) Corrosion protection, Bell substation	Fiscal year 1962	5,000
Subtotal, work underway		14,000
NEW WORK		
(c) Crossbraces for wood-pole structures	Fiscal year 1961	11,000
(d) Battery charger replacements	do	19,000
(e) Transformer cooling fans, Bonners Ferry substation	September 1961	3,000
(f) Disconnect switch grounding blades	August 1961	5,000
(g) Other new work	Fiscal year 1961	100,000
Subtotal, new work		138,000
Total, budget item 699		152,000

SPOKANE AREA—LOWER PORTION

North Central Oregon service (item 720): Construction in progress, $803,000

This item provides for the construction of a 51-mile, 115-kilovolt transmission line, from the Administration's De Moss substation to Fossil, Oreg., via Condon. The line will be initially operated at 69-kilovolt. Also included in this item is the conversion of an existing terminal position at De Moss substation, a 69-kilovolt point of delivery to the Columbia Basin Electric Cooperative from a tap on the line in the vicinity of Condon, and the construction of a switching station in the vicinity of Fossil which will connect to the Columbia Power Cooperative's existing Antelope-Service Creek 69-kilovolt line. These facilities will serve the Columbia Basin Electric Cooperative, the Columbia Power Cooperative, and the Wasco Electric Cooperative, and are scheduled for energization in October 1961.

Eight hundred and three thousand dollars is required in fiscal year 1961 for acquisition of land, purchase of minor materials for the line, purchase of materials for the Fossil switching station, award of a right-of-way clearing contract, and award of contracts for the construction of the line and the Fossil station.

Harney Electric Cooperative Service (item 721): Construction in progress, $1,052,000

This facility consists of the installation of a 69/115-kilovolt transformer at Redmond substation, and the construction of a 115-kilovolt transmission line approximately 128 miles in length from Redmond substation to the vicinity of Burns, Oreg., to supply service to the Harney Electric Cooperative. Energization of these facilities is scheduled for November 1961.

$1,052,000 is required in fiscal year 1961 for surveys, design, acquisition of land, purchase of minor materials, and award of contracts for clearing and construction of the line.

The Harney Electric Cooperative was organized in October 1954 and commenced electric service to its members in March 1957. It serves the area lying generally south of Burns, Oreg., in central Harney County and surrounding Malheur Lake. Electric power is purchased by the cooperative from the Idaho Power Co. and is received by the cooperative in the vicinity of Burns after being wheeled over a portion of the California-Pacific Utilities' 69-kilovolt transmission system. From the vicinity of Burns the cooperative has a 69-kilovolt line to its Lawen substation from where service is supplied over approximately 575 miles of distribution line.

Other transmission facilities (item 799): New construction, $206,000

This general item provides for miscellaneous small system additions and improvements in southeastern Washington and eastern Oregon which involve small sums and do not warrant segregation under separate item numbers.

	Scheduled completion	1961 requirements
NEW WORK		
(a) Cross braces for wood-pole structures	Fiscal year 1961	$8,000
(b) Battery charger replacements	do	17,000
(c) Station service additions, Franklin substation	June 1961	7,000
(d) Oscillograph, McNary substation	November 1961	16,000
(e) 115-kilovolt line sectionalizing switches	October 1961	6,000
(f) Battery replacement, Midway substation	June 1961	18,000
(g) Prosser substation additions	September 1961	19,000
(h) Transformer cooling fans, and temperature indicator, Goldendale substation.	do	7,000
(i) Disconnect switch grounding blades	August 1961	8,000
(j) Other new work	Fiscal year 1961	100,000
Total, budget item 799		206,000

GENERAL SYSTEM FACILITIES

General structures and improvements (item 810)

Construction in progress	$365,000
New construction	554,000
Total	919,000

	Station	Scheduled completion	1961 requirements
WORK UNDERWAY			
(a) Drainage system	Snohomish	June 1961	$42,000
(b) Extension of repair and test facilities for electrical apparatus.	J. D. Ross	February 1961	176,000
(c) Building addition	do	do	103,000
(d) Maintenance building	D. R. Keeler	November 1960.	44,000
Subtotal, work underway			365,000
NEW CONSTRUCTION			
(e) Storage facility additions	J. P. Alvey	September 1961.	74,000
	J. D. Ross	do	32,000
(f) Roof replacements	G. H. Bell	June 1961	10,000
	J. D. Ross	October 1961	113,000
(g) Roof installation	do	July 1961	10,000
(h) Paving	Big Eddy	do	30,000
	Longview	June 1961	20,000
	Olympia	do	17,000
(i) Road relocation	Grand Coulee	do	11,000
(j) Hot-stick storage facilities	do	February 1961	5,000
	Hot Springs	do	4,000
(k) Oil piping	J. D. Ross	March 1961	60,000
	Oregon City	May 1961	23,000
(l) Electric space heating	J. D. Ross	do	3,000
(m) Supply service center	do	November 1962.	142,000
Subtotal, new construction			554,000
Total, budget item 810			919,000

Communications facilities (item 820)

Construction in progress	$137,000
New construction	165,000
Total	302,000

	Scheduled completion	1961 requirements
WORK UNDERWAY		
(a) Very-high-frequency radio additions, southwest Oregon	February 1961	$4,000
(b) Supervisory control of 230-kilovolt system from Portland	Fiscal year 1961	6,000
(c) Supervisory control of Santiam Substation	March 1961	13,000
(d) Very-high-frequency land radio stations for Tillamook-Toledo area.	October 1960	8,000
(e) Precipitation and temperature recording stations	Fiscal years 1961 and 1962.	17,000
(f) Very-high-frequency radio channel, Franklin-Midway	June 1961	25,000
(g) Dual polarization of radiofrequency paths, Portland-Alvey and Portland-Snohomish circuits.	December 1960	51,000
(h) Hydrologic network reporting facilities	do	6,000
(i) Telemetering facilities	October 1960	7,000
Subtotal, work underway		137,000
NEW WORK		
(j) Emergency microwave power supplies	June 1961	27,000
(k) Telephone switchboard, Longview substation	do	13,000
(l) Supervisory control of Salem substation	April 1962	53,000
(m) Ground water observation network	Fiscal year 1962	34,000
(n) Very-high-frequency radio stations	March 1962	13,000
(o) Other communication facilities	Fiscal year 1961	25,000
Subtotal, new work		165,000
Total, budget item 820		302,000

Tools and equipment (item 830): General plant, $786,000

This item covers the tools and equipment used in the operation, maintenance, and construction of the Administration's power system. The total cost for the fiscal year 1961 program amounts to $844,000 from which may be deducted estimated receipts of $58,000 from the sale of replaced equipment, leaving an appropriation requirement of $786,000. Special purpose vehicles, construction and maintenance equipment, and conventional types of motor vehicles used at remote locations are supplied from the Administration-owned fleet. Following is a summary of the Administration's tool and equipment program:

	Total cost	Sales credits	Net requirements
(a) Office furniture and equipment	$83,000	$6,000	$77,000
(b) Helicopter	56,000	15,000	41,000
(c) Transportation equipment	388,000	37,000	351,000
(d) Shop equipment	5,000		5,000
(e) Laboratory equipment	177,000		177,000
(f) Tools and work equipment	68,000		68,000
(g) Communications equipment	67,000		67,000
Total	844,000	58,000	786,000

(a) Office equipment replacements include typewriters, calculators, adding machines, chairs, filing cabinets, and duplicating machines in the amount of $37,000. The average age of typewriters to be replaced is 17½ years; calculators, 17 years; and adding machines, 15 years. Additional general office equipment such as card and stationery cabinets, electric typewriters, adding machines, printing calculators, and a computyper will cost $40,000.

(b) It is proposed to replace a helicopter purchased in 1952. It is the first helicopter acquired by the Administration and will have been in service 9 years in fiscal year 1961. Replacement should be made in the interests of safety and efficiency. The industry recommends replacement in from 4 to 7 years, depending on severity of service.

(c) The Bonneville Power Administration's fleet of motor equipment will be held to the 1960 level of 536. It is proposed to replace 93 motor vehicles which represents a fleet turnover of 17.3 percent. The net appropriation requirement of $351,000 is 14.7 percent of the $2,395,000 acquisition cost of presently owned equipment. A significant factor related to increasing cost is higher purchase prices. As an example, sedan deliveries cost 11 percent more in fiscal year 1959 than in fiscal year 1957. Increases in other types of equipment are comparable. The following motor vehicles are to be replaced:

Description	*Number*
Sedan deliveries, 4 by 2	29
Carryalls, 4 by 4	24
Light trucks, ½- by ¾-ton, 4 by 2	11
Light trucks, pickup, 4 by 4	11
Light trucks, flatbeds and panels	1
Light trucks, 1-ton power wagon, 4 by 4	7
Trucks, 1½-ton, 4 by 2	2
Trucks, 2-ton, 4 by 2	1
Line trucks, multiple drive	2
Trucks, flatbed, multiple drive	3
Truck tractors, multiple drive	2
Total	93

The Administration depends on three General Services Administration motorpool systems, which have been established within its territory, for standard-type motor vehicles headquartered in their designated areas. Special-purpose vehicles, construction and maintenance equipment, and standard-type motor vehicles headquartered at remote locations are supplied from the Administration-owned fleet.

(d) Shop equipment is used in the automotive repair and plant service shops at the Ross and Bell substations, and in seven small field shops. The funds requested are for modernization, mechanization, and replacements.

(e) Laboratory equipment consists of a wide variety of chemical, mechanical, optical, and electrical instruments and devices used in the testing and maintenance of electrical equipment, analysis of system electrical equipment, evaluation of system methods of operation, and planning system additions.

Additional engineering equipment proposed to be purchased in fiscal year 1961 amounting to $45,000 will be used for photogrammetric work, conductor vibration and radio noise studies, electronics studies, network analyses, and switching transient and lightning arrester monitoring.

Additional operation and maintenance equipment amounting to $23,000 consists of oscillogram scaling instruments, Cincinnati recorders, circuit breaker testers, motor-driven meggers, recording voltmeters, a variable frequency test set, and miscellaneous test instruments.

$53,000 will be required to equip four additional generators of the alternating current network analyzer with automatic swing curve plotting equipment, convert four existing generators to electronic generators, provide for an automatic readout for transient stability studies, and procure operational checking equipment. This additional equipment for automation of the network analyzer will raise the capacity of the board to 27 generators, and make possible power system stability studies of the more complicated system of 1961. It will also increase the number of studies that may be performed on the analyzer.

Modernization and mechanization requirements of $26,000 include modernization of the insulation of the surge generator and improvement of Cincinnati recorders on short-stroke circuit breakers.

$30,000 will be required to replace old, obsolete, or damaged equipment. Much of the older gear is limited in operation and accuracy, which prevents maximum utilization of newer equipment.

(f) Additional tools and work equipment are proposed to be purchased in the amount of $15,000. Included are power megaphones for line crews, air compressors and vacuum cleaners for substation maintenance crews, conductor burnishers and micro surveying barographs.

$13,000 is required for modernization of presently owned equipment, and to develop and promote the mechanization program through purchase of newly designed or manufactured items for field proving.

$40,000 is required for replacement of equipment which has been in service from 10 to 15 years. Replacements scheduled in fiscal year 1961 amount to 5.7

percent of the tool and work equipment inventory, and are made on an individual basis after considering such factors as obsolescence, repair costs, and service life.

(*g*) Portable electronic maintenance instruments amounting to $25,000 are scheduled to be purchased in fiscal year 1961. These instruments are required to equip communication maintenance district headquarters and isolated radio stations with standard instruments required by new types of installed communication and control equipment, and to replace wornout instruments necessary in the maintenance of older equipment remaining in service.

Twenty mobile radio equipment sets costing $38,000 are essential to provide communications to maintenance crews in transit and at isolated locations where no other communication facilities are available. The additions of supervisory control has unmanned numerous stations and eliminated the former practice of leaving telephone messages with station operators. Emergency crews and maintenance trucks in isolated areas operate in all kinds of weather and require radio equipment, not only for the performance of duty but also for safety.

Portable radio equipment for areas inaccessible for mobile radio equipment, and equipment for special needs arising during the budget year are estimated at $4,000.

Preliminary engineering studies (item 840): $200,000

Preliminary engineering funds are for investigations to provide accurate data for projects under consideration for future construction, and for other preconstruction work where timing is critical. Examples are—

(1) Reconnaissance, preliminary or partial surveys, and design studies of alternative transmission line routes, substation site locations, radio signal patterns and additions to existing substations.

(2) Cost analyses of the above to determine the most economical combination of facilities in terms of capital and annual costs, integration with existing and proposed facilities, and operating and maintenance requirements.

(3) Investigation, design, and selection of principal material and equipment components preparatory to initiation of specific projects.

SYSTEM ELECTRICAL FACILITIES

Transformer additions (item 871)

Construction in progress	$31,000
New construction	199,000
Total	230,000

Summary.—It is proposed to add transformer capacity in substations of the Administration as listed on the accompanying tabulations. Scheduled energization dates are as shown.

Fund requirements.—For work in progress $31,000 is required in 1961 for completion of design, purchase of minor materials, and construction.

For new work $199,000 is required in 1961 for design, purchase of auxiliary equipment, and for installation costs at Wren and Ione substations. Transformers will be available from the system for Bremerton, Wren, and Ione substations.

Circuit breaker replacements (item 880)

Construction in progress	$90,000
New construction	601,000
Total	691,000

Summary.—Work will be in progress in fiscal year 1961 on the replacement of one 115-kilovolt and five 230-kilovolt circuit breakers. New work proposed in 1961 consists of the replacement of eight and the rebuilding of four 230-kilovolt circuit breakers. The work is scheduled to be completed during the period from June 1961 to May 1962.

Fund requirements.—For work in progress, $90,000 will be required in fiscal year 1961 for installation of the Covington and Midway breakers.

For new work, $601,000 will be required in fiscal year 1961 for purchase of material for rebuilding the Columbia breakers, installation of the Columbia breakers, and purchase of the Midway and Ross breakers.

ITEMIZATION OF ESTIMATE

Bonneville Power Administration

	Estimate, 1960	Estimate, 1961	Increase(+)or decrease (−)
Program and financing:			
Total obligations	$22,656,124	$20,628,000	−$2,028,124
Unobligated balance carried forward	422,000		−422,000
	[1] 195,000		−195,000
Unobligated balance brought forward	−430,124	−422,000	8,124
Advances and reimbursements from—			
Other agencies	−1,379,000	−1,471,000	−92,000
Non-Federal sources	−14,000	−15,000	−1,000
Appropriation	21,450,000	18,720,000	−2,730,000
Obligations by objects:			
01 Personal services	7,597,000	7,300,000	−297,000
02 Travel	682,000	690,000	+8,000
03 Transportation of things	48,000	48,000	
04 Communication services	94,000	94,000	
05 Rents and utility services	113,000	111,000	−2,000
06 Printing and reproduction	5,000	4,000	−1,000
07 Other contractual services	573,000	623,000	+50,000
08 Supplies and materials	5,802,124	4,230,000	−1,572,124
09 Equipment	2,600,000	1,900,000	−700,000
10 Lands and structures	4,622,000	5,124,000	+502,000
11 Grants, subsidies, and contributions	496,000	480,000	−16,000
13 Refunds, awards, and indemnities	24,000	24,000	
Total obligations	22,656,124	20,628,000	−2,028,124

[1] Allocated for transfer to operation and maintenance to cover wage increase.

Analysis by activities—Operation and maintenance

Activities	Amount available, 1960	Estimate, 1961	Increases
1. System operation and maintenance	$8,962,750	$9,670,000	$707,250
2. Power contracts and rates	323,000	325,000	2,000
3. General administration	903,000	980,000	77,000
Total	10,188,750	10,975,000	786,250

OPERATION AND MAINTENANCE $10,975,000

The fiscal year 1961 program of the Bonneville Power Administration for operation and maintenance of the transmission system, power contracts, rates, and related general administration activities totals $10,975,000. The program provides for reliable operation, maintenance in accordance with good utility practice, commercial relations with customers, and effective management. Tables on pages BP78, BP79, and BP80 show a summary of the operation and maintenance program requirements and statistics illustrating some of the factors which contribute to the increases.

Basically, increases in operation and maintenance result from the addition of new transmission facilities and the aging of existing transmission facilities. New lines and substations and additions to existing lines and substations are necessary to transmit to delivery centers the added power coming into the Pacific Northwest from new Federal generation and, under wheeling arrangements, from new non-Federal generating plants. Moreover, as existing facilities reach certain age levels, major maintenance is required to extend their service lives.

1. System operation and maintenance, $9,670,000

Subactivity	Amount available, 1960	Estimate, 1961	Increases
(a) System operation	$3,088,000	$3,155,000	$67,000
(b) System maintenance	4,769,000	5,250,000	481,000
(c) Power resources and req	294,000	303,000	9,000
(d) General services and supv	811,750	962,000	150,250
Total	8,962,750	9,670,000	707,250

(a) System operation, $3,155,000

Summary and fund requirements.—$3,155,000 is requested in fiscal year 1961 for the operation of the transmission system, an increase of $67,000 over fiscal year 1960. This increase is related to the expansion of the transmission system, and to the scheduling and dispatching of additional Federal electrical energy and additional non-Federal energy which the Administration has contracted to wheel.

	1960	1961	Change
Substation operation	$2,260,000	$2,268,000	+$8,000
Power scheduling	165,000	182,000	+17,000
Power dispatching	239,000	259,000	+20,000
Operational studies	102,000	112,000	+10,000
Leased power facilities	176,000	179,000	+3,000
Leased communication facilities	82,000	94,000	+12,000
Supervision	64,000	61,000	−3,000
Total, system operation	3,088,000	3,155,000	+67,000

(b) System maintenance, $5,250,000

Summary and fund requirements.—$5,250,000 is requested in 1961 for the maintenance of the transmission system, an increase of $481,000 over 1960. The increase is required because of new units of equipment coming on the system, and because other facilities are reaching an age which require major maintenance.

	1960	1961	Increase
Transmission lines	$1,348,000	$1,539,000	$191,000
Substations	1,308,000	1,479,000	171,000
Meters and relays	747,000	769,000	22,000
Communications	860,000	926,000	66,000
Buildings, grounds, and other maintenance services	344,000	374,000	30,000
Supervision	162,000	163,000	1,000
Total, system maintenance	4,769,000	5,250,000	481,000

(c) Power resources and requirements, $303,000

Summary and fund requirements.—$303,000 is required in 1961 for this activity. This compares with $294,000 in 1960. The increase of $9,000 over 1960 is due largely to the growth of the system and area generation resources.

(d) General services and supervision, $962,000

Summary, fund requirements and activities.—$962,000 is required in 1961, an increase of $150,250 over 1960. Activity components and comparison of dollar amounts are shown in the following table:

	1960	1961	Increase
Area management and engineering services	$325,750	$365,000	$39,250
System engineering and technical analyses	295,000	341,000	46,000
Safety and civil defense	50,000	53,000	3,000
Direction of operation and maintenance	55,000	56,000	1,000
Social security, engineer training, life and health insurance	86,000	147,000	61,000
Total, general services and supervision	811,750	962,000	150,250

2. Power contracts and rates, $325,000

Summary and fund requirements.—$325,000 is required in 1961 for this activity, an increase of $2,000 over 1960.

Activities.—Power contract and rate activities consist of the negotiation and administration of power sales, exchange, wheeling, and other types of contracts; the planning, coordination, and review of plans for electrical facilities to serve customers; computation of bills for wholesale power, wheeling, and other accounts; the preparation of official reports required by the Federal Power Commission and others on generation, sales, and other data relative to deliveries and transmission of power; and studies of the Administration's wholesale power rates and revenues.

3. General administration, $980,000

Activities	Amount available, 1960	Estimate, 1961	Increases
(a) Administration	$198,000	$213,000	$15,000
(b) Personnel	110,000	110,000	
(c) Administrative services	272,000	288,000	16,000
(d) Fiscal services	223,000	245,000	22,000
(e) Budget and management	59,000	65,000	6,000
(f) General services	41,000	59,000	18,000
Total	903,000	980,000	77,000

Summary and fund requirements.—$980,000 is requested in 1961 for general administration, an increase of $77,000 over 1960. The increase is needed primarily for the increased allocation of the costs of the staff performing this activity to operation and maintenance functions with a corresponding decrease in costs to construction.

Activities.—Activities included in general administration are executive direction and policy formulation; fiscal, administrative, and personnel management; office services, reproduction services, mail and records, library operations, drafting and graphics, budget and management, supply supervision, procurement services, and management training.

Justification.—Since the Administration is engaged in both a construction program and an operation and maintenance program, general administrative costs are allocable to both programs in proportion to the administrative functions necessary in accomplishing them. As new facilities are brought into service and the system continues to age, the operation and maintenance program increases in size and importance. The growth of this program requires an increasing allocation of general administrative costs to operation and maintenance and a corresponding decrease in the allocation to construction. The increase in this activity in 1961 is basically the result of this shift in allocation of general administration costs.

Staffing changes.—No increase in personnel will be required for this activity in 1961.

ITEMIZATION OF ESTIMATE

Bonneville Power Administration

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing:			
Total obligations	$10,188,750	$10,975,000	+$786,250
New obligational authority	10,188,750	10,975,000	+786,250
New obligational authority:			
Appropriation	9,993,750	10,975,000	+981,250
Proposed supplemental due to wage increase	195,000		−195,000
Obligations by objects:			
01 Personal services	7,222,000	7,622,000	+400,000
02 Travel	244,000	250,000	+6,000
03 Transportation of things	33,000	34,000	+1,000
04 Communications	209,000	228,000	+19,000
05 Rents and utility services	122,000	122,000	
06 Printing and reproduction	3,000	3,000	
07 Other contractual services	409,000	586,000	+177,000
Payment for services performed by the "Construction" appropriation	953,000	1,046,000	+93,000
08 Supplies and materials	518,000	586,000	+68,000
11 Grants, subsidies, and contributions	456,750	478,000	+21,250
13 Refunds, awards, and indemnities	19,000	20,000	+1,000
Total obligations	10,188,750	10,975,000	+786,250

PREPARED STATEMENT

Mr. PEARL. We appreciate this opportunity of meeting with you to go over our budget for 1961. I have a written statement that I would like to supply for the record.

Chairman HAYDEN. You may do that.

Mr. PEARL. Then with just two or three charts I can cover the matter of our budget in a few minutes.

Chairman HAYDEN. Very well. We will do it that way.

(The statement referred to follows:)

STATEMENT OF WILLIAM A. PEARL, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION

Thank you, Mr. Chairman, for this opportunity to appear before your committee with the budget proposed for the Bonneville Power Administration for fiscal year 1961. Determinations for our construction program are based on: (1) facilities required to meet load growth and continue service to our customers; (2) major grid facilities needed for additional generation being placed in service by the Corps of Engineers; (3) transmission capacity to wheel power for non-Federal utilities in the Pacific Northwest in accordance with contracts now in existence or under negotiation. Operation and maintenance requirements are basically related to the size and age of the transmission system to be operated and maintained.

During the fiscal years 1961 through 1964 the Corps of Engineers is scheduled to add new generation with a peaking capacity of 553,000 kilowatts. This generation is being installed at Ice Harbor, Hills Creek, Cougar, and the Dalles projects. Transmission of this power will be over the Bonneville Power Administration's system.

The Federal John Day Dam is scheduled for initial generation after 1964, the last year of the period covered by this budget. Transmission of this generation will be considered in future budgets of the Administration.

Peaking capacity additions in 1961 through 1964 at non-Federal plants to be wheeled by the Administration total 1,186,000 kilowatts. Facilities in this budget will have capacity for wheeling power generated at the non-Federal Rock Island, Priest Rapids, Rocky Reach, Mayfield, Carmen-Trail Bridge, and Wanapum hydroelectric plants.

In total, 1,739,000 kilowatts of additional peaking capacity, which the Administration's system will be required to carry, is scheduled at Federal and non-Federal projects during the 4-fiscal year period covered by our 1961 construction budget estimates. Transmission facilities presented in our 1961 construction budget are scheduled for completion within this 4-year period. Total Federal and wheeled non-Federal generation will reach 9,486,000 kilowatts by July 1964.

A reduction in our original construction budget request of $20,220,000 has been submitted to the Congress by the President. This reduction of $1,500,000 is the result of engineering determination that specific items to be retired from present installations are technically adaptable for installation at new locations. Engineering studies also have determined that maximum permissible loadings can be substantially increased on three presently installed transformers, thereby deferring the need for installation of larger transformers at this time. The effect of these reductions on our 1961 appropriation request is shown in the following tabulation:

Original program	$20,642,000
Carryover from prior fiscal year	−422,000
Original appropriation request	20,220,000
Reduction as per S. Doc. 86	−1,500,000
Revised appropriation request	18,720,000

CONSTRUCTION

The principal new construction item in our 1961 program is for a second 345-kilovolt line from the Chelan Public Utility District's switchyard (at its new Rocky Reach hydroelectric plant now under construction) to the Bonneville Power Administration's Maple Valley substation. This project is needed to transmit power from Federal and non-Federal plants to the Puget Sound area. Other facilities programed for 1961 are related to the schedule of new generation installations. These facilities will provide for reinforcement of customer services, equipment replacements and additions, and improvement in system stability.

OPERATION AND MAINTENANCE

Our budget estimate for operation and maintenance in 1961 is $10,975,000, an increase of $786,000 over 1960. This increase is associated with the operation and maintenance of new facilities and with major maintenance required to extend the service lives of existing facilities. The existing facilities have reached the age where most costly complete replacement will be required unless the major maintenance is performed. Also contributing to the increase are costs of the Federal Employee Health Benefits Act.

GENERAL STATEMENT

Mr. PEARL. The construction part of our budget is a function of new generation that is coming in the area, for which we provide transmission lines to carry the power to load centers.

Chairman HAYDEN. The chart entitled, "Peak Generation Capacity Additions" will be printed in the record.

(The chart referred to follows:)

Peak generation capacity additions scheduled for installation, fiscal year 1961 budget period

[Thousands of kilowatts]

	In service, July 1, 1960	Fiscal year 1961	Fiscal year 1962	Fiscal year 1963	Fiscal year 1964	Total in service, July 1, 1964	Scheduled for later budget periods
Federal projects:							
Completed projects	5,831.0					5,831.0	
The Dalles	1,076.4	179.4				1,255.8	
Hills Creek			34.5			34.5	
Ice Harbor			310.5			310.5	
Cougar				28.8		28.8	
John Day							1,500.0
Total, Federal projects	6,907.4	179.4	345.0	28.8		7,460.6	1,500.0
Firm wheeling for non-Federal projects: [1]							
Completed projects	514.2					514.2	
Priest Rapids	324.9	139.2				464.1	
Rocky Reach			619.5			619.5	
Mayfield			120.0			120.0	
Carmen-Trail Bridge				53.5		53.5	
Wanapum					254.1	254.1	169.4
Total, non-Federal projects	839.1	139.2	739.5	53.5	254.1	2,025.4	169.4
Grand total	7,746.5	318.6	1,084.5	82.3	254.1	9,486.0	1,669.4
Cumulative grand total	7,746.5	8,065.1	9,149.6	9,231.9	9,486.0	9,486.0	11,155.4

[1] Amounts show power wheeled or to be wheeled by the Administration.

INCREASED LOADS

Mr. PEARL. In 1961 we have 319,000 kilowatts of new generation, in 1962, 1,084,000 kilowatts in 1963, 82,000 kilowatts and in 1964, 254,000 kilowatts.

The facilities that we are budgeting are for this new generation and to take care of increased loads of our present customers, where we need larger transformers and other facilities.

Let's move to the next chart to compare our 1961 budget with last year's budget. Our construction budget request for 1961 is $20,220,000.

Chairman HAYDEN. The chart entitled, "Appropriation Comparisons" will be printed in the record.

(The chart referred to follows:)

Appropriation comparisons

	1959	1960	1961
Construction:			
New appropriations	$20,934,000	$21,450,000	$20,220,000
Carryover from prior year	77,000	430,000	422,000
Total, construction funds available	21,011,000	21,880,000	20,642,000
Carryover to succeeding year	−430,000	−422,000	
Total, construction program	20,581,000	21,458,000	20,642,000
Operation and maintenance	9,546,000	[1] 10,189,000	10,975,000
Reimbursements	651,000	617,000	617,000
Continuing fund			
Trust funds	326,000	460,000	484,000
Total	31,104,000	32,724,000	32,718,000

[1] Includes $195,000 anticipated supplemental for wage increases.

FUND REDUCTION

Mr. PEARL. Since we made up this budget we have found that we can save about a million and a half dollars by using some material we have and by reduced costs and other factors.

Chairman HAYDEN. Reduced costs, that is news to everybody.

Mr. PEARL. Well, some of our contracts have not been bid quite as high as we anticipated. So our request for new construction funds for 1961 is $18,720,000 instead of $20,220,000. This make the total budget for our construction program for 1961, including carryover funds, $19,142,000.

OPERATION AND MAINTENANCE

Our operation and maintenance budget is $10,975,000. Other funds, consisting of trust funds and reimbursements, give us a total program for 1961 of $31,218,000. That compares with our current year program of $32,529,000.

Our program in 1959 was $31,104,000.

Are there any questions about this?

Chairman HAYDEN. No. Proceed.

CONSTRUCTION

Mr. PEARL. Construction program breaks down as follows: Construction in progress, $12,239,000; new construction, $6,117,000; and general plant, $786,000, giving us our total budget of $19,142,000 for 1961.

NEW STARTS

Chairman HAYDEN. I think it would be of interest to the committee if you would submit a statement for the record about the new facilities that are included in your construction program.

Mr. PEARL. We will be glad to do that.

(The information referred to follows:)

SUMMARY STATEMENT OF PRINCIPAL 1961 CONSTRUCTION NEW FACILITIES

System reactive facilities (item 150)

The addition of reactive capacity to the main transmission grid is a broad, long-range, continuing program which is related to the addition of generating capacity. 1961 new starts amount to 100,000 kilovolt-amperes. These installations will be completed by the fall of 1962.

Rocky Reach-Maple Valley No. 2 (item 182)

It is proposed to construct a second 345-kilovolt line, approximately 129 miles in length, from the Chelan Public Utility District's Rocky Reach switchyard to the Bonneville Power Administration's Maple Valley substation. The two Rocky Reach-Maple Valley lines will be operated at 230 kilovolts until additional transmission capacity is required into the Puget Sound area from the east. The Administration will install the 230-kilovolt Maple Valley terminal for line No. 2, and the district will supply the Rocky Reach terminal. The No. 2 circuit will consist of approximately 78 miles on single-circuit towers, and 51 miles strung on the open side of the double-circuit towers being erected as part of the No. 1 line. Energization is scheduled for October 1963.

This project is necessary to transmit that portion of the power for the Puget Sound area, beginning in the 1963–64 load period, which will be supplied from Federal plants and from non-Federal plants for which the Administration has firm wheeling commitments.

Hanna substation additions (item 184)

It is planned to install a 230-kilovolt line terminal with a circuit breaker, and reconnect the transformers at the Hanna substation to 230 kilovolts. The California Oregon Power Co. presently serves this station by transfer at 115 kilovolts and plans to change the transmission voltage to 230 kilovolts. Energization is scheduled for September 1961. Conversion of the line to 230-kilovolt operation requires reconnection of the transformer and the installation of a 230-kilovolt terminal.

East Wenatchee area service (item 247)

It is proposed to construct approximately 8 miles of 115-kilovolt transmission line from the Administration's Keokuk substation to the vicinity of East Wenatchee, Wash., and there construct a 20,000/26,667/33,333-kilovolt-ampere, 115–13.8-kilovolt substation. This substation will be known as Eastmont substation and will serve the Douglas County Public Utility District. Energization of these proposed facilities is scheduled for July 1962.

The Douglas County Public Utility District has requested that the Administration supply the power requirements of its East Wenatchee service area presently supplied by power purchased from the Chelan County Public Utility District under a power contract between the two districts. The districts plan to terminate this contract upon availability of power from the Administration's Eastmont substation.

Power is presently delivered to the Douglas County Public Utility District by the Chelan County Public Utility District at the latter's Wenatchee 115–24.5-kilovolt substation. From this point, Douglas has a 34.5-kilovolt transmission system extending to its East Wenatchee service area. These facilities are heavily loaded and will shortly become inadequate. It has been determined that the most feasible method of serving the Douglas County Public Utility District at East Wenatchee on an overall cost basis, is construction by the Administration of the proposed transmission line and substation, and construction by the district of necessary distribution facilities from this delivery point.

Fern Ridge substation (item 362)

It is proposed to construct a 3,000-kilovolt-ampere, 115–12.5-kilovolt substation on the Administration's Eugene-Mapleton 115-kilovolt transmission line, approximately 12 miles west of Eugene and in the vicinity of Veneta, Oreg., for service to the Lane County Electric Cooperative. This substation is scheduled for energization in September 1961.

The Lane County Electric Cooperative presently serves its loads in the area concerned by means of low-voltage lines from a 4,500-kilovolt-ampere, 12–34.5-kilovolt transformer located in the Administration's Eugene substation. Loads on the cooperative system in this area have been increasing to the point where poor voltage conditions are being experienced. In addition, the capacity of the Administration's existing 12–34.5-kilovolt transformation at Eugene substation will soon be exceeded. Engineering and economic studies demonstrate that construction of the proposed new facilities is the most feasible plan, on an overall cost basis, for meeting the increasing loads in the Veneta area.

Hampton substation (item 363)

It is proposed to construct a 3,000-kilovolt-ampere, 115–14.4/24.9-kilovolt substation on the Administration's Redmond-Burns 115-kilovolt transmission line, approximately 53 miles east of Bend, Oreg., for service to Central Electric Cooperative. Energization of this substation is scheduled for November 1961.

Central station power is not now available in the Hampton area. Extension of the cooperative's lines into the area heretofore has not been feasible due principally to the long subtransmission line required. Service to this area can be rendered on an economic basis by means of the proposed Hampton substation on the Redmond-Burns 115-kilovolt line. The cooperative will construct approximately 50 miles of distribution circuits from the Hampton substation.

Gold Beach substation additions (item 378)

It is proposed to construct a 115-kilovolt terminal position with circuit breaker in the Administration's Gold Beach substation for service to the Coos-Curry Electric Cooperative. The energization of this terminal position is scheduled for October 1961.

The Coos-Curry Electric Cooperative presently serves its loads in the Brookings area from its 69-kilovolt point of delivery in the Administration's 15,000-kilovolt-ampere, 115–69-kilovolt Gold Beach substation. The cooperative has two

69-kilovolt transmission lines between Gold Beach and Brookings, one of which is constructed for 115-kilovolt operation. The cooperative has requested the Administration to provide the necessary 115-kilovolt facilities at Gold Beach to permit operating this line at 115 kilovolts. Construction of the proposed new 115-kilovolt terminal facility will avoid the necessity of the Administration's installing additional 69-kilovolt transformer capacity in the Gold Beach substation to serve the cooperative's increasing loads.

General structures and improvements (item 810)

The following new items are included in the proposed program for fiscal year 1961:

New construction	Station	Scheduled completion
Storage facility additions	J. P. Alvey	September 1961.
	J. D. Ross	Do.
Roof replacements	G. H. Bell	June 1961.
Roof installation	J. D. Ross	October 1961.
Paving	do	July 1961.
	Big Eddy	Do.
Road relocation	Longview	June 1961.
	Olympia	Do.
Hot-stick storage facilities	Grand Coulee	Do.
	do	February 1961.
Oil piping	Hot Springs	Do.
	J. D. Ross	March 1961.
Electric space heating	Oregon City	May 1961.
Supply service center	J. D. Ross	Do.
	do	November 1962.

Transformer additions (item 871)

It is proposed to add the following additional transformer capacity in existing substations of the Administration in order to keep pace with load growth.

Substation	Customer	Present transformer rating (kilovolt-amperes)	Proposed transformer rating (kilovolt-amperes)	Energization date
Bremerton	Puget Sound Naval Shipyard	27,000	39,000	October 1961.
Ione	Columbia Basin Electric Cooperative	1,500	2,500	June 1961.
Wren	Consumers Power, Inc	3,000	10,500	September 1961.

Circuit breaker replacements (item 880)

New work proposed in 1961 consists of the replacement of eight and the rebuilding of four 230-kilovolt circuit breakers as follows:

Substation	Number of breakers	Type of work	Interrupting rating, kilovolt-ampere		Scheduled completion
			Present	Proposed	
Columbia	4	Rebuilding	3,330,000	7,500,000	June 1961.
Do	1	Replacement.	3,330,000	7,500,000	Do.
Midway	4	do	7,500,000	15,000,000	May 1962.
Ross	3	do	3,500,000	7,500,000	January 1962.

OPERATION AND MAINTENANCE

Mr. PEARL. Let's go to our next chart.

Chairman HAYDEN. The chart entitled "Operation and maintenance program summary" will be included in the record.

(The chart referred to follows:)

Operation and maintenance program summary

	1960		1961		Requested increases, 1960 to 1961		
	Estimate	Percent of total	Request	Percent of total	Amount of increase	Percent increase	Distribution of total increase
1. System operation and maintenance	$8,962,750	88.0	$9,670,000	88.1	$707,250	7.9	90.0
(a) System operations	3,088,000	30.3	3,155,000	28.7	67,000	2.2	8.6
(b) System maintenance	4,769,000	46.8	5,250,000	47.8	481,000	10.1	61.2
(c) Power resources and requirements	294,000	2.9	303,000	2.8	9,000	3.1	1.1
(d) General services and supervision	811,750	8.0	962,000	8.8	150,250	18.5	19.1
2. Power contracts and rates	323,000	3.1	325,000	3.0	2,000	.6	.2
3. General administration	903,000	8.9	980,000	8.9	77,000	8.5	9.8
(a) Administration	198,000	1.9	213,000	1.9	15,000	7.6	1.9
(b) Personnel	110,000	1.1	110,000	1.0			
(c) Administrative services	272,000	2.7	288,000	2.6	16,000	5.9	2.0
(d) Fiscal services	223,000	2.2	245,000	2.3	22,000	9.9	2.8
(e) Budget and management	59,000	.6	65,000	.6	6,000	10.2	.8
(f) General services	41,000	.4	59,000	.5	18,000	43.9	2.3
Total	10,188,750	100.0	10,975,000	100.0	786,250	7.7	100.0

BUDGET PROGRAM

Mr. PEARL. Our budget consists of construction, and operation and maintenance. Our construction budget is for facilities to carry the power to the load centers. Our operation and maintenance funds are required to maintain and operate the physical plant. The physical plant grows each year, and is indicated on this chart. I won't go into detail but we have shown how many substations, for example, we have to operate and maintain in 1959, in 1960, and in 1961. In 1961 we will have seven more substations to operate than in 1960. We have given all the other detail of our physical plant and have indicated the growth of the physical plant in 1961 over 1960, therein justifying a higher O. & M. budget for 1961 than in 1960.

We will move to the next chart.

This chart shows our operation and maintenance costs and why they have gone up. The operation and maintenance program is a function of the size and age of the physical plant. Bonneville has been in existence for some 22 years. Many of our pole lines that were built 20 years ago will need replacing because of rot of the poles; and brush removal grows from year to year. We have prepared a chart to indicate all these items that tend to cause these program increases, comparing the 1959, 1960, and 1961 figures, and giving the percent of increased maintenance requirements because of the increased size and age.

Chairman HAYDEN. You have increased maintenance. On the other hand you have increased revenues from increased sales, but the rate that you receive remains the same.

INCREASED REVENUE

Mr. PEARL. Our revenues go up each year as we put in more physical plant to deliver more power to the load centers.

We have more revenue. Our rates are the same but we have more revenue because we sell more kilowatt hours.

Chairman HAYDEN. That's right.

Mr. PEARL. So the revenue actually increases each year.

Chairman HAYDEN. The ratio of maintenance to revenue remains about the same.

Mr. PEARL. I would have to modify that to the extent that our load growth has not been as large as we had expected for the last few years. We could easily calculate and submit the ratio of maintenance to revenue for the record, if you would like, and I assume you would like to know it percentagewise?

Chairman HAYDEN. Yes, that is right.

Mr. PEARL. Mr. Ostrander will be glad to provide such a statement for the record.

Chairman HAYDEN. All right.

(The information referred to follows:)

The chart under discussion shows that obligations for maintenance services were $4,468,208 for fiscal year 1959 and that such obligations for fiscal years 1960 and 1961 are estimated at $4,769,000 and $5,250,000, respectively. On the basis of these data and comparable maintenance services obligation data for fiscal years 1957 and 1958 the following ratios have been computed:

Fiscal year	Ratio of maintenance services obligations to BPA gross operating revenues	Ratio of maintenance services obligations of BPA average electric plant in service
	Percent	*Percent*
1957	5.26	0.93
1958	6.08	1.00
1959	6.57	1.04
1960 estimated	6.40	1.06
1961 estimated	6.65	1.12

NOTE.—All data used in computing these ratios are for the Bonneville Power Administration only and thus exclude the generating projects. The maintenance services obligations are only a portion of the Administration's total operation and maintenance program.

AREAS OF INCREASE

Mr. PEARL. To give you an idea of where the O. & M. increase occurs, we have provided a chart that shows the percent increase of O. & M. for each one of our activities. Maintenance gets the large percent of the increase. In other words, of the total increase in O. & M., 61 percent goes to maintenance. The increases in the other activities are relatively small, running from eight-tenths of 1 percent up to 19 percent.

Chairman HAYDEN. Included in that 61 percent is your salaries and wages and all that?

Mr. PEARL. That is everything in there. Everything that goes toward maintenance is in there. Now that covers our budget rather hurriedly and I was told that you were anxious for us to sum it up briefly.

REPAYMENT STATUS

Chairman HAYDEN. Well, on page 10 of the justification I note Columbia Power System has operated at a deficit of $6.6 million and you anticipate deficits of approximately $5 million in the current fiscal year and in 1961.

At the close of the year 1959 what was the repayment status of the system?

Mr. PEARL. Mr. Ostrander, have you that figure?

Mr. OSTRANDER. Yes, at the end of fiscal year 1959 we were almost $65 million ahead of schedule in the repayment of our capital investment.

Chairman HAYDEN. You can't quite keep that up unless you get more revenue?

Mr. OSTRANDER. That is right, sir. We are falling a little behind now but we have a substantial surplus to work on for the next few years.

Chairman HAYDEN. I note exhibit No. 19 that the system operated at a surplus for the fiscal year 1957.

Ever since 1958 you show a deficit for each year, please comment on these deficits and could you tell the committee when you feel you would begin to operate in the black again?

EXPLANATION OF PAST DEFICITS

Mr. OSTRANDER. In fiscal year 1958 we had our first system deficit of $2,950,000. The next year, 1959, the deficit was $6,600,000. In 1959 had we been able to sell our power we would have been very much in the black. Specifically, the aluminum companies reduced their purchase of firm power from us in the amount of $1,100,000 and they reduced their purchase of secondary power in the amount of $5,900,000. That is a total of $7 million, which is more than our deficit. We also had some $7 million of other firm power unsold, and some nonfirm unsold. For the current fiscal year and the next year or two, we have enough power, which, if we could sell it, we would be in the black. The Administration and the Department are now working on proposals for the sale of additional firm power and substantial amounts of secondary (interruptible) power to industry, primarily for expansion of industrial plant operations in the Pacific Northwest. If this can be accomplished it will not only help the economy of the area and the Nation, but it will improve the Federal power system's financial position.

Now, what will happen a few years hence it is hard to say because there are several rather important developments in the offing. These include that John Day project, a very large one will start coming into service in 1967 and it is, of course, a more expensive project, because, of course, costs are higher now.

Also, the Atomic Energy Commission may put in a reactor plant, and that may come into our system in a few years.

NEGOTIATIONS WITH CANADA

Also, there are the current negotiations with Canada for storage and generation up there which might have a very beneficial effect if that could be worked out. So we just don't know what is going to happen 5 years from now, but our problem right now is trying to sell some more power, although I think eventually we probably will have to have a rate increase.

Chairman HAYDEN. That is what I was coming to next. If you are unable to sell more power, then you have got to charge more for what you do sell.

Mr. OSTRANDER. That is right. We have been very fortunate in the past in that we have sold right up to our capacity.

Chairman HAYDEN. Aluminum was a great boon for you.

Mr. OSTRANDER. They took much more power from us than expected, especially the secondary source of power which you normally don't expect to sell. So we have been very fortunate in the past.

Chairman HAYDEN. Is the aluminum business coming back at all?

Mr. PEARL. Yes; the aluminum companies predict that it will come back. Our revenue estimate assumed it would come back within a year but it didn't do that, and that accounts, as Mr. Ostrander says, for our going into the red as we did. However, the companies are very optimistic regarding how soon they will recover.

Chairman HAYDEN. Well, you make the payment of principal and interest each year?

Mr. PEARL. Yes.

Chairman HAYDEN. On top of that, you say you are how much ahead?

REPAYMENT OF PRINCIPAL

Mr. OSTRANDER. We are $65 million ahead on the repayment of our principal.

Chairman HAYDEN. And the interest is being paid at 3 percent?

Mr. OSTRANDER. All of the interest and operation and maintenance expenses have been paid, 3 percent on the reclamation projects and 2½ percent on the other projects. And that is all paid. Even in these 2 years where we had deficits, we had enough—more than enough—to cover our expenses, but did not quite come up to the scheduled amortization.

Chairman HAYDEN. All right; have you any further comments you would like to make?

Mr. PEARL. No; I haven't. If there are any questions——

Chairman HAYDEN. I think you have answered all of them.

Mr. PEARL. Thank you.

Mr. WOODRUFF. Representative Coad?

Chairman HAYDEN. I am very glad to hear from you, sir.

TRANSMISSION LINE IN WESTERN IOWA

STATEMENT OF HON. MERWIN COAD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF IOWA

GENERAL STATEMENT

Mr. COAD. Mr. Chairman, before I begin with my prepared remarks, I would like to congratulate you for taking all the time and expending all the efforts that I know you do to conduct these hearings. You probably know more as a single individual about the problems regarding this general area than any other person in the United States, and I congratulate you on it.

Chairman HAYDEN. Well, I know where to go to ask for the information.

Mr. COAD. A lot of us are willing to come to you, too, to ask.

Mr. Chairman, I come today to address this committee in support of a public works appropriation to continue the construction of a

Bureau of Reclamation transmission line in western Iowa. I had the honor of appearing before your committee last year in support of the $800,000 "Design and construction" appropriation. We in Iowa were very pleased that your committee recommended the appropriation last year and that it was approved by the Congress in the public works appropriation bill, which was passed over the veto of the President. We are also very pleased that the Bureau of Reclamation has proceeded with the design and survey work in connection with the line.

They have obtained entry rights from virtually all of the properties to be used or crossed by the line, and should complete the survey work before too long.

ECONOMIC FEASIBILITY

As the testimony of the Bureau and various groups from Iowa given last year indicated, this line is an economically feasible one. The Government will earn a profit off it of at least half a million dollars over its life.

The line will also save the farmers and municipal users more than $600,000 per year in their costs of power.

This amount will increase greatly as the load grows. It was also fully established last year that the line will furnish much more satisfactory service to cooperatives and municipals in western Iowa than they could receive from any proposed wheeling arrangement from the power companies. The Bureau line will be designed and constructed especially to serve the needs of those customers and will deliver the power to the load centers.

I had assumed that since this line is such a beneficial one, and appropriations had been made last year to commence its construction, that there would be no question but that the appropriation requested in the budget to carry forward construction this year would be approved without opposition.

POWER COMPANY OPPOSITION

However, the power companies who opposed the line last year have been back in full force this year trying to stop the necessary appropriation and to have the Government abandon the $800,000 investment which has now been made.

In addition to repeating their arguments against the line, which were discredited by the action of the Congress a year ago, they have come up with two gimmicks. The Bureau of Reclamation, following its standard procedure, is building a diagonal routed line. This, of course, results in much cheaper construction costs to the Government. Certain lines have stirred up the farmers on purpose in a few isolated areas and succeeded in having them sign petitions protesting the diagonal routing over their farms, and I might say this from my own personal knowledge, that many of the people who have signed these petitions were not aware of the full significance of what they were doing, but that they had been incited to sign a petition, and I am sure you are well aware that many people sign petitions and they don't even know what it is that they are signing.

The farmer witnesses appearing before this committee have incated that while the diagonal routing causes some inconvenience until the farmers become accustomed to farming around the poles, there

is no serious resulting problem. Furthermore, the Government pays well for the easements which are granted across the farm. They expressed the opinion that once the farmers have the facts explained to them, the Bureau will not experience serious difficulty in obtaining the necessary rights-of-way.

And I have personally talked to farmers in my district who, when they understand this, see no problem whatsoever. And some of these farmers, of course, are the ones on whose very property this line will cross.

Now the second argument advanced this year by the power companies is, indeed a specious one. The Bureau of Reclamation will conduct a board study of the proposed line at its Denver engineering headquarters some time this year and it is right and proper that they should. The Board study is made to enable the engineers to determine how the power flows, how it should be controlled, and to answer certain other technical questions.

Now despite the fact that it has nothing to do with the economics of the line, it has nothing to do with the amounts of the earnings to be made by the Government from the line, and that last it has nothing to do with the amount of savings to be made by the cooperatives and the municipalities, the power companies are asking this committee to postpone an appropriation this year until this study has been finished.

I am certain that the committee will not be misled by this type of tactics.

TECHNICAL STUDY

Chairman HAYDEN. Are you certain that that is all that is involved, just a technical study?

Mr. COAD. According to my understanding that is correct. It is a technical study and has nothing to do with the economics of this line.

It is much like determining, if you have users on a water system, which way the water is going to flow. It is not a matter of how much of it is going to be used, but it is which direction the water is going to flow in the pipe and that has nothing to do with the economics of the situation fundamentally.

Now on behalf of the cooperatives and the municipalities in my district, and the people of western Iowa, and I might say about whom they have the broadest area of agreement on this of any project of this size by the Federal Government that I have ever seen, I respectfully urge this committee to recommend the appropriation requested in the budget for the construction of the line.

Chairman HAYDEN. We thank you for your statement, sir.

Mr. COAD. Thank you, Mr. Chairman.

Mr. WOODRUFF. Representative Gubser.

CENTRAL VALLEY PROJECT

STATEMENT OF HON. C. S. GUBSER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA

GENERAL STATEMENT

Mr. GUBSER. Senator, thank you very much for the opportunity of submitting this testimony. I might say that my district is the famous Santa Clara Valley in California, which contains the sixth ranking agricultural county in the Nation, with tremendous investments in apricot and prune orchards and high-yield type of agriculture.

Chairman HAYDEN. I don't know just where that stands in relation to Maricopa County, Ariz.

Mr. GUBSER. Well, I can say we are not a competitor of Maricopa County in Arizona.

Our principal problem is that we are an area which is isolated from the principal sources of water in California, by a coastal mountain range. Another main problem has been water conservation. We have done a great deal for ourselves to the point where in my own water conservation district, we are paying over $4 per $100 of assessed valuation for water conservation. Now we have been attempting to secure outside help.

Today I am in a position that I have never occupied before in 8 years of Congress. I am not here to ask for an increase in budgeted items, and I might say, Mr. Chairman, that I think the reason for that is the liberal and the selective approach that has been taken by this committee to solve domestic problems.

You have recognized our problem and have helped us considerably.

BUDGET REQUESTS

So my only request today, Mr. Chairman, is for the retention of two budgeted items. The first is for an investigation for the San Felipe division of the Central Valley project. It is a budget request of $170,000. This is well underway. It is a most important study which will determine our water future, and I might say that the cooperation between the local officials and the bureau has been outstanding. This is financed 50 percent with local effort and 50 percent with Federal effort.

HERNANDEZ DAM

The only other item, Mr. Chairman, is an application made under the provisions of Public Law 984, Small Reclamation Projects Act, by the San Benito County Water Conservation and Flood Control District for a loan of $1,420,000 for the construction of the Hernandez Dam which would provide water for a rich agricultural area.

Chairman HAYDEN. Where is that area in comparison to San Jose?

Mr. GUBSER. This is San Benito County, the principal city of which is about 45 miles out of San Jose, or about 95 miles south of San Francisco.

I respectfully request that your committee give consideration to retaining these items, and I thank you for the opportunity of appearing before you today. I would be glad to answer any questions.

Chairman HAYDEN. Well, thank you. I think you have made a very clear and concise statement.

Mr. WOODRUFF. Mr. Leavy?

SOUTHEASTERN POWER ADMINISTRATION

STATEMENT OF C. W. LEAVY, ADMINISTRATOR

JUSTIFICATIONS

Chairman HAYDEN. The budget estimate for "Operation and maintenance, Southeastern Power Administration" is $800,000, which is an increase of $83,375 over the appropriation for the current fiscal year.

The justifications will be included in the record.

(The justifications referred to follow:)

DEPARTMENT OF THE INTERIOR—SOUTHEASTERN POWER ADMINISTRATION

Operation and maintenance

Appropriation Act, 1960	$716,625
Amount available, 1960	716,625
Increases	83,375
Budget estimate, 1961	800,000

Analysis by activities

	Amount available, 1960	Estimate, 1961	Increases
1. System operation and maintenance	$80,000	$80,000	
2. Purchase of energy and wheeling charges	455,625	539,000	$83,375
3. Power contracts and rates	96,000	96,000	
4. General administration	85,000	85,000	
Total	716,625	800,000	83,375

Funds required for appropriation

The agency's appropriation request consists entirely of operation and maintenance funds in the amount of $800,000. The funds are distributed among four activities; namely, system operation and maintenance, power contracts and rates, general administration, and purchase of energy and wheeling charges. Purchase of energy and wheeling charges is estimated to require $539,000. The remaining $261,000 is required for actual operation of the agency and provides for a continuation of the agency's working force at the current year level.

Status of revenues

Last year's actual revenues and the revenues which are estimated for the current year and the budget year are as follows:

Projects	Fiscal year 1959 (actual)	Fiscal year 1960 (estimated)	Fiscal year 1961 (estimated)
Wolf Creek Center Hill Dale Hollow	$1,710,000.00	$3,950,000	$3,950,000
Old Hickory Cheatham	1,622,288.00	2,030,000	2,400,000
Allatoona Buford	2,430,210.18	2,642,830	2,642,800
Clark Hill	3,619,027.25	4,339,900	3,923,900
Jim Woodruff	1,335,274.66	1,382,800	1,435,100
Philpott	223,836.45	217,100	217,100
John H. Kerr	3,923,227.33	4,472,320	4,537,120
Total	14,863,863.87	19,034,950	19,106,020

JUSTIFICATION

System operation and maintenance, $80,000

The amount requested for this activity for the budget year is the same as the amount available for the activity for the current year.

The activity is carried out to provide schedules for the generation of power, supervision of power deliveries as required by contractual arrangements, and determination of methods of coordinating operation of present and proposed generating plants to obtain maximum utilization of resources.

Constituent tasks of the activity enumerated below are accomplished continuously in every year. Their scope will increase somewhat in the budget year as a consequence of operational and power disposal arrangements under negotiation during the budget year.

1. *Studies of project operations, long range.*—Studies are made for the purpose of determining the amounts of power and energy available for sale, and the operations required in obtaining the maximum amounts of such power and energy. They involve consideration of the characteristics of the project, historic streamflows, effects of upstream developments, requirements for downstream riverflows, and characteristics of the load to be served. Prior to the start of negotiations for sale of power from the project, an initial study is made based on anticipated upstream development at the time the project is to be completed, anticipated requirements for downstream riverflows, and estimated characteristics of the load to be served. As negotiations progress and additional information is obtained as to the characteristics of the load to be served, revised studies are made to take these into account. Many such studies may be required during the negotiation of a single major contract. After the completion of the contract, operating experience and changes in upstream river development and requirements for downstream riverflows (or proposals for such upstream development or change in riverflows) require additional studies to take into account revised factors.

2. *Studies of integrated project operations.*—Studies of integrated project operations are project operation studies of two or more projects to determine whether the operation of those projects should be integrated to result in a greater output from the combined operation than can be obtained from the operation of the projects individually. In addition, it involves the study of the methods of accomplishing the integrated operation through existing or potential electrical interconnections of the projects.

3. *Current determinations of power and energy available.*—In connection with the projects which are in operation it is necessary to make determinations of the energy available from time to time (normally at intervals of 1 week) to control the current operations of the projects. These determinations are based on rule curves and other criteria developed by the project operation and integration studies previously discussed and current streamflow conditions and forecasts of streamflow conditions. This is a continuing responsibility which is affected by the complexity of the arrangements for marketing of the power, such as whether the projects are operated independently or integrated.

4. *Scheduling, storage and release of water, and delivery of power and coordination of project operations with other projects and with the operations of utilities receiving*

power from the projects.—The basis for this activity is the information developed by the long-range and current studies previously discussed. It involves telephone contacts with the operators of the various utilities and the various projects and with water control engineers in the various Corps of Engineers district and division offices to advise the utilities of the power available; to arrange for schedules of deliveries; to arrange for receipts of power from the utilities to be stored in Government reservoirs; to arrange with the project operators for delivery and receipt of the power in accordance with the schedules agreed on with the utility operators and with the water-control engineers to assure that releases for power are not inconsistent with the requirement for releases for other functions of the project such as navigation and flood control. Arrangements made by telephone are confirmed in writing and in some more difficult situations personal conferences are required.

5. *Administration of contractual operating requirements.*—This involves such activities as making arrangements with the customers and plant operators for taking equipment out of service for maintenance and inspection, classifying and recording power and energy deliveries in accordance with contracts and other commitments, and making arrangements for proper voltage levels and other conditions on the systems of the customers in order to provide good service to all customers. This is a continuing activity, the volume of which is variable but which tends to increase with an increase in the number of agencies receiving power at the project.

6. *Meter testing and maintenance.*—In order that the power and energy delivered to the customers may be accurately measured it is necessary to test all meters used in measuring deliveries of power and energy at intervals not greater than 1 year. It is necessary that a representative of the agency be present at the meter test and arrangements must be made with the corps for performing individual tests and with the customer involved so that it may be represented by a witness at the test. In connection with the meters used in measuring deliveries from the utility systems to customers of the Government, where tests are performed by the utility, the Administration receives notification of such tests and makes arrangement for the affected Government customer to be represented if he desires.

7. *Reporting.*—The Administration is required to submit to the Federal Power Commission an annual report on FPC Form No. 12. The Administration also participates in reporting to the Edison Electric Institute on the power operations in the southeastern United States. Complete annual reports and abbreviated midyear reports are required for this purpose.

Purchase of energy and wheeling charges, $539,000

The amount requested for this activity for the budget year is an increase of $83,375 over the amount available for the activity for the current year. The increase is to provide (unlike the appropriation for the current year) for the requirements in the most adverse year that may be anticipated and to provide for additional costs on contracts now under negotiation.

Funds appropriated for this activity are used only to pay amounts charged the Government under contractual arrangements for (1) delivery of power over non-Federal systems to load centers of preferred agencies for the account of the Government and (2) purchase by the Government of energy to firm up federally generated power to the load factor required by preferred agencies, of energy to prevent excessive drawdown of reservoirs, and of capacity required to meet commitments from the Jim Woodruff project under certain water conditions. The budget year appropriation requested for the activity is required solely to meet budget year obligations under existing contracts with Virginia Electric & Power Co. and Florida Power Corp.

During the budget year, power will be wheeled to 17 preferred agencies at approximately 94 points of wholesale delivery under the Virginia Electric & Power Co. contract, to 16 preferred agencies at approximately 77 points of wholesale delivery under the Carolina Power & Light Co. contract, to 86 preferred agencies at approximately 292 wholesale points of delivery under the Georgia Power Co. contract, and to 6 preferred agencies at 19 points of delivery under the Florida Power Corp. contract. A transmission contract with Georgia Power Co. provides for the transfer of power for the account of the Government between Jim Woodruff project and the Allatoona, Buford, and Clark Hill projects.

Under the existing contracts with Virginia Electric & Power Co. and Florida Power Corp. the Government purchases firming energy where necessary in order to supply its customers at their load factor. Under the arrangements with Carolina Power & Light Co. and Georgia Power Co. such energy is sold directly by the companies to preferred agencies. The contract with Florida Power Corp.

also provides for the purchase of capacity needed to supply the Government's commitments when capacity, in excess of the 20,000 kilowatts which can be transferred under the Georgia Power Co. transmission agreement, is required.

The appropriation for the current year and the request for the budget year are based upon the payment on a monthly basis from appropriated funds only of the amount due each company for wheeling and firming over and above any amount due the Government from that company for the same month. Such a netting of bills substantially reduces the required use of appropriated funds.

Under this procedure no appropriated funds will be required for payments under the contracts with Carolina Power & Light Co. and Georgia Power Co. since, under any recorded water condition, the amount charged during any month by the Government for power sold either company will exceed the amount charged against the Government by that company for payment of wheeling fees.

Under certain water conditions there will be months in which a net balance exists against the Government under the contracts with Virginia Electric & Power Co. and Florida Power Corp. It is for the payment of these adverse net balances that funds for this activity are requested.

The estimated requirement for fiscal year 1961 under the most adverse conditions that may be reasonably anticipated is $539,000. This is based upon the requirements which would have occurred in the year 1931, which year results in the highest cost under the two contracts for any year as to which water records for the projects involved are available. As indicated on the tabulation which follows, in that year the payments which would have been required to Virginia Electric & Power Co. would have been $484,409 and the payments which would have been required to Florida Power Corp. would have amounted to $54,200, or a total of $538,609. While the conditions of some of the other water years of record would require greater payments to Florida Power Corp., the amount of this increase for those particular years would in all cases be less than the amount of the decrease required in payments to Virginia Electric & Power Co.

The request for funds is based upon the worst predictable situation since it would not be possible to operate on the basis of an appropriation for only the average amount necessary under the net-billing procedure. This is because an appropriation of only an average amount could be exhausted very quickly in a year of higher than average cost without permitting time to secure a supplemental appropriation, particularly if higher than average costs occurred early in the fiscal year when Congress was not in session.

The estimate makes no specific provision for payment for purchase of capacity from Florida Power Corp. in emergencies. Such payments would not occur unless the interconnections of that company with the Southern Company System were lost in excess of 1 hour at a time when a unit or units were out at the Jim Woodruff project. It is not feasible to evaluate the risks of this occurrence or the amount of payments which might be involved. The estimate also does not specifically provide funds for reimbursement to the Georgia Power Co. for additional costs incurred when the company supplies additional deficiency energy to preferred customers in emergencies or when the Government reduces deliveries to the company below the minimum amounts specified in the contract. It is not feasible to evaluate the likelihood of this occurrence or the amount of payments which might be involved. Aside from the foregoing occurrences or a major change in water patterns an appropriation of $539,000 would be sufficient under all reasonably predictable circumstances.

Power contracts and rates, $96,000

The amount requested for this activity for the budget year is the same as that available for the activity for the current year.

The activity is conducted to prepare for, accomplish, maintain, and review the results of power disposal arrangements. In its conduct the agency establishes and secures approval of rates, determines purchasers and delivery measures, negotiates and administers appropriate contracts, and conducts continuous review of results.

The tasks making up the activity are continuing in nature. Their number is subject to some variation from year to year according to circumstances, as is the placement of emphasis among them. Both their number and the amount of work entailed in their accomplishment will be greater in the budget year than in the current year.

1. *Appraisal of proposed hydroelectric developments.*—To establish financial feasibility of hydroelectric projects proposed for construction, joint appraisal is conducted at the planning stage by the field agencies of the Corps of Engineers, the Department of the Interior, and the Federal Power Commission. The

appraisals employ estimated costs only, and have for a principal requirement on Southeastern the determination of whether prospective revenues are adequate to repay estimated allocations of cost to power. The determination necessitates Southeastern's conduct of preliminary cost allocation, rate and repayment studies, the results of which are reviewed at meetings held in regular series by the three field agencies, and frequently involve questions of project design and operation.

2. *Determination of cost allocations.*—Agreement on cost allocation was reached among the Department of the Interior, Corps of Engineers, and Federal Power Commission during fiscal year 1954. The agreement provides criteria for a joint, field level determination of costs, cost allocation methods, and amounts for allocation. Field agency determinations under the criteria were begun in 1954, are in progress during the current year and will be conducted during the budget year. Results of the three agencies' respective studies are reviewed and reconciled at meetings held in a regular series. Southeastern's role in the joint determinations requires accomplishment of cost allocation, rate and repayment studies that test allocations to power against obtainable power revenue. This task may involve single projects or the much more complex situation of a combination of projects in a single basin.

3. *Rate establishment and presentation for approval.*—Rate schedules are required to be drawn so as to produce revenue sufficient to pay the expenses of operation, maintenance, interest, and amortization of the investment in the projects and their related power facilities. Establishment and presentation of rates for confirmation and approval by the Federal Power Commission require the accomplishment of detailed cost allocation, rate and repayment studies based on varying assumptions that reflect the effect of proposed rates and take into account preliminary and final cost allocations, proposed and actual contract arrangements for the sale of power, and anticipated and actual project operation and maintenance costs.

4. *Determination that revenue is adequate to repay power investment.*—Repayment schedules are prepared and maintained for each project and for combinations of projects in one basin or sold under one contract in the course of the agency's work to appraise proposed hydroelectric developments, determine cost allocations, and present rates for approval. They are prepared at the outset on the basis of estimated project costs, and are then adjusted as actual costs are reported during construction. Once the project has been completed they are adjusted periodically to reflect actual revenues and actual costs, including operation and maintenance expenses and interest and amortization. Following the approval of rates, repayment accounts are set up and maintained for each project. The accounts are maintained to insure that the revenue required to repay the project is actually materializing according to the repayment schedule.

5. *Investigation of the market.*—Disposal of the firm power, secondary energy, nondependable capacity and dump energy components of the projects' output requires both a comprehensive knowledge of the existing needs of the market and an accurate forecast of the market's future needs. Determinations of vendibility, by reason of the several uses to which they are put, must begin well in advance of the construction of projects and must thereafter undergo continuous refinement and revision to reflect changing conditions. Preliminary determinations are needed for use during the agency's participation in interagency appraisal of proposed hydroelectric developments. Exact knowledge of the existing and prospective size and character of each public body and cooperative load in the areas surrounding projects in operation and under construction is essential to an equitable disposition of power, since these agencies are by law given a preference in the sale of power and their combined requirements far exceed the power available for disposal. Accurate information on present and future load is required in determining the quantities and kinds of power available for sale at the project, in determining whether non-Federal facilities offered for the transmission of power are available on reasonable terms, in making estimates of power revenues for fiscal and other purposes, and in determining the funds needed in the coming year for the purchase of firming energy and the payment of wheeling fees. To obtain a proper return from nondependable capacity and dump energy available at the projects it is essential to have continuous knowledge of the load and generation conditions prevailing on the systems of the major utilities comprising the market for this product.

6. *Determinations of alternative transmission costs.*—It is the policy of the Department to build and operate transmission facilities to carry power to points of wholesale delivery within economic transmission distances unless other public or private agencies have or will provide the necessary facilities upon reasonable terms—the terms generally to be such that the federally produced power will be

made available to purchasers at costs not higher than would result from the construction of transmission facilities by the Federal Government. Engineering and economic studies are required to develop data upon which appropriate action under the policy may be judged by the Department.

7. *Contract negotiation.*—Contracts are negotiated for the sale of power, the employment of non-Federal transmission facilities, and the purchase of firming energy. All three purposes may be served in one contract, as in the existing contract with the Virginia Electric & Power Co. for the wheeling, firming, and sale of Kerr project power. The larger number of contracts (for example, those with rural electric cooperatives) are for power sales only. The negotiations frequently raise complicated engineering and economic problems (particularly the negotiations with large utility systems) the resolution of which becomes for the time a major element in the workload of the agency as a whole.

8. *Administration of power sales contracts.*—Continuing service requirements begin with the initial delivery of power under each contract. Some are intermittent, such as the investigation of complaints, the negotiation of changes in the contract demand, and the establishment of new points of delivery. Others occur regularly in every month. In the latter category are power billing, collection of bill payments, and the maintenance of customer accounts. The billing routine comprises a major portion of the workload. Information recorded by meters is collected monthly and processed by calculation into data from which bills are rendered. The calculation involves determination of losses between points of delivery and points of metering, check of power usage against contract provisions to determine the application of penalties, and the development of appropriate constants and correction factors in order that the power quantities for which bills are rendered may properly reflect load diversity, divisions of energy between onpeak and offpeak periods, and the reactive requirements of the load. The extent of the contract administration workload in any year corresponds roughly to the number of contracts on hand.

9. *Reporting.*—Monthly and annual summaries of power marketing information are required for the orderly conduct of the activity. Periodic reports are required by the Federal Power Commission (FPC Form No. 1). Establishment of repayment accounting for the newly operating projects, the expanded marketing arrangements for administration, and other such factors, will increase the amount of work required in the preparation of reports, although the reports will not increase in number over the current year.

General administration, $85,000

The amount requested for this activity for the budget year is the same as that available for the activity for the current year.

The activity is conducted to provide executive management for the agency and to supply the agency with supporting administrative and fiscal services. Its extent from year to year results from and is proportionate to the extent of the agency's other activities. It consists principally of the following tasks:

1. *Management.*—The agency's program is determined by secretarial criteria. Coordination of the agency's activities and their executive direction and control is secured by staff conference, written directives, and a systematic reviwe of transactions in progress. The effectiveness of procedures, methods, and routines is subjected to regular appraisal.

2. *Personnel.*—Actions are taken, records are maintained, and reports are forwarded to accomplish recruitment, separation from the service, job classification, promotion, performance rating, retirement, and the like, under procedures required by the Department, the Civil Service Commission, and the Congress.

3. *Procurement and office services.*—Materials, equipment, supplies, and services are purchased, records and reference materials are managed, mail is processed and handled, duplicating equipment is operated, motor vehicles and headquarters premises are maintained, staff transportation is secured, switchboard communication is operated, space is managed, and other work of a similar nature is performed to support the operation of the agency.

4. *Fiscal services.*—Accounts are established and maintained to record and control the expenditure of appropriated funds in accordance with the terms of their appropriation. Periodic and special reports on the status of accounts are prepared and forwarded as prescribed by the Department, the General Accounting Office, and others.

5. *Budget.*—In each year, program criteria established for the coming year are reflected into an estimate of appropriations required. Departmental review

of the estimate is secured, and presentations for justification are made to the Bureau of the Budget and to the Congress in accordance with their respective procedures.

ITEMIZATION OF ESTIMATE

Southeastern Power Administration

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing:			
Total obligations	$716,625	$800,000	+$83,375
Appropriation	716,625	800,000	+83,375
Obligations by objects:			
01 Personal services	223,000	223,000	
02 Travel	7,000	7,000	
03 Transportation of things			
04 Communication services	5,000	5,000	
05 Rents and utility services			
06 Printing and reproduction	500	500	
07 Other contractual services	461,625	545,000	+83,375
08 Supplies and materials	2,500	2,500	
09 Equipment	2,500	2,500	
11 Grants, subsidies, and contributions: Contributions to retirement fund	14,500	14,500	
15 Taxes and assessments			
Total obligations	716,625	800,000	+83,375

GENERAL STATEMENT

Chairman HAYDEN. Mr. Leavy, you may proceed with your statement.

Mr. LEAVY. Mr. Chairman, I have a statement that I would like to put in the record and if you wish I will simply highlight that to save a little bit of time.

Chairman HAYDEN. That may be done.

Mr. LEAVY. You, of course, are already acquainted with the statutory authority for the Southeastern Power Administration and with the activities for which the agency is responsible.

I would, however, like to invite your attention to the map attached to your copies of this statement which shows the area and the hydroelectric projects with which we are concerned and the table of capacity installations at the projects which is the first attachment to the statement.

The power now generated at the projects in operation is being sold under 134 long-term contracts and also 2 short-term interim agreements.

WOLF CREEK, CENTER HILL, AND DALE HOLLOW PROJECTS

The entire output of the Wolf Creek, Center Hill, and Dale Hollow projects is being sold to the Tennessee Valley Authority under a long-term contract and the entire output of the Old Hickory and Cheatham projects is also being sold to the Authority under another long-term contract.

JOHN H. KERR PROJECT

Two-thirds of the output of the John H. Kerr project is being sold under long-term contracts to the Virginia Electric & Power Co. and to 17 rural electric cooperatives in Virginia and North Carolina.

The remaining one-third is being sold under long-term contracts to the Carolina Power & Light Co. and to 15 rural electric cooperatives and 1 municipality in North Carolina.

Chairman HAYDEN. They all adjusted their differences and all is going along all right, is it?

Mr. LEAVY. Yes, sir.

Chairman HAYDEN. We had quite a little hassle about that, you remember.

Mr. LEAVY. We did. We had quite a hassle in Georgia and things are going very well there, too.

PHILPOTT PROJECT

The output of the Philpott project is being sold to the Appalachian Power Co. under a short-term interim agreement. Negotiations with Virginia Electric & Power Co. and cooperatives in the company's service area for the long-term sale of the output of this project are at an advanced stage.

It is contemplated that the Philpott output will be sold to the same customers and on the same basis as the Kerr output that is being sold in the Vepco service area.

CLARK HILL PROJECT

Clark Hill project power allocated to South Carolina is being sold to the South Carolina Public Service Authority and Greenwood County Electric Power Commission under long-term contracts, and to the South Carolina Electric & Gas Co. under a short-term "when, as, and if" available contract. Clark Hill power allocated to Georgia and the output of the Allatoona and Buford projects is being sold under long-term contracts to the Georgia Power Co., and to 39 rural electric cooperatives, and 47 municipalities in Georgia.

JIM WOODRUFF PROJECT

Power from the Jim Woodruff project is being sold under long-term contracts to four cooperatives and to two municipalities in Florida located in the service area of the Florida Power Corp.

STATUS OF REVENUES

The status of revenues is set forth in the table which is the second attachment to the statement. You will note that last year's actual revenues reached a total of almost $16 million. This revenue was less than normal due to poorer than average water conditions. We estimate that the total of this year's earned revenues will be approximately $19 million, and that the total revenue earned for the budget year will be approximately the same amount.

MARKETING POWER

An appropriation of $800,000 consisting entirely of operation and maintenance funds is requested for the activities involved in marketing power. The activities are: system operation and maintenance, purchase of energy and wheeling charges, power contracts and rates, and general administration.

The sum of $539,000 is requested for purchase of energy and wheeling charges, to be devoted exclusively to the purchases of firming energy and the payment of wheeling fees under contracts with Virginia Electric & Power Co. and Florida Power Corp.

The remaining $261,000 of the appropriation request will provide for the system operation and maintenance, power contracts and rates, and general administration activities comprising the direct operation and maintenance of the agency headquarters.

Of this amount $80,000 is requested for system operation and maintenance, $96,000 for power contracts and rates, and $85,000 for general administration.

PURCHASE OF ENERGY AND WHEELING CHARGES

You will note that the request for funds for purchase of energy and wheeling charges amounts to $539,000 as compared to $474,000 for the current year. The increase is to provide (unlike the appropriation for the current year) for the requirements in the most adverse year that may be anticipated and to provide for additional costs on contracts now under negotiation.

The request for funds is based upon the worst predictable situation since it would not be possible to operate on the basis of an appropriation for only the average amount necessary under the net billing procedure.

This is because an appropriation of only an average amount could be exhausted very quickly in a year of higher than average cost without permitting time to secure a supplemental appropriation, particularly if higher than average costs occurred early in the fiscal year when Congress was not in session.

That concludes my statement, sir.

REVENUES

Chairman HAYDEN. On page 6 of the justification I note that your revenues for the fiscal year of 1959 totaled 14.8 million, and your estimate for the current year is 19 million, and 19.1 million for fiscal year 1961. Would you please comment on this increase?

Mr. LEAVY. The revenues for the last fiscal year were less than the average revenue we might expect since water conditions were poorer than average. The average water condition will produce about the $19 million that we are estimating for this year. Water conditions this year are such that we anticipate revenues of approximately 19 million.

NEW GENERATION

Chairman HAYDEN. Will any new generation come in on line projects in your area during fiscal year 1961?

Mr. LEAVY. No; the next new generation is scheduled for June of calendar year 1962. That is the Hartwell project, and a few months later the Walter George project comes in. That will be the fiscal year 1962.

Chairman HAYDEN. What was the first mentioned; the Hartwell? Where is the location?

Mr. LEAVY. The Hartwell project is located on the Savannah River between Georgia and South Carolina above the Clark Hill project.

Chairman HAYDEN. The two tabulations attached to your statement will be included in the record.

(The tabulations referred to follow:)

CURRENT YEAR STATUS OF GENERATING CAPACITY

January 1960 status of generating capacity and marketing arrangements

	Kilowatts operating at January of current year	Kilowatts under construction for operation in—			Total
		Current year	Fiscal year 1962	Fiscal year 1963 or later	
1. Wolf Creek	270,000				270,000
2. Center Hill	135,000				135,000
3. Dale Hollow	54,600				54,600
4. Allatoona	74,000				74,000
5. Philpott	14,000				14,000
6. John H. Kerr	204,000				204,000
7. Clark Hill	280,000				280,000
8. Jim Woodruff	30,000				30,000
9. Buford	86,000				86,000
10. Old Hickory	100,000				100,000
11. Cheatham	12,000	24,000			36,000
12. Hartwell			66,000	264,000	330,000
13. Walter F. George				130,000	130,000
14. Barkley				130,000	130,000
Total	1,259,600	24,000	66,000	524,000	1,873,600

Status of revenues

Projects	Fiscal year 1959 (actual)	Fiscal year 1960 (estimated)	Fiscal year 1961 (estimated)
Wolf Creek Center Hill Dale Hollow	$1,710,000.00	$3,950,000	$3,950,000
Old Hickory Cheatham	1,622,288.00	2,030,000	2,400,000
Allatoona Buford	2,430,210.18	2,642,830	2,642,800
Clark Hill	3,619,027.25	4,339,900	3,923,900
Jim Woodruff	1,335,274.66	1,382,800	1,435,100
Philpott	223,836.45	217,100	217,100
John H. Kerr	3,923,227.33	4,472,320	4,537,120
Total	14,863,863.87	19,034,940	19,106,020

SOUTHWESTERN POWER ADMINISTRATION

STATEMENT OF D. G. WRIGHT, ADMINISTRATOR, ACCOMPANIED BY F. G. FISTER, ASSISTANT ADMINISTRATOR; AND W. J. CHRISTIAN, BUDGET ANALYST

JUSTIFICATION

Chairman HAYDEN. We will take up the requests of the Southwestern Power Administration. The justifications will be included in the record.

(The justification follows:)

DEPARTMENT OF THE INTERIOR—SOUTHWESTERN POWER ADMINISTRATION

Construction

Appropriation Act, 1960		$858,000
Unobligated balance from prior year		285,725
Total available, 1960		1,143,725
Decreases:		
Construction in progress	$285,725	
New construction and additions	858,000	
		1,143,725
Base, 1961		----------
Increases:		
New construction and additions		1,325,000
Budget estimate, 1961		1,325,000

Analysis by activities—Construction

Activities	Amount available, 1960	Estimate, 1961	Increase
1. Construction in progress	$285,725	----------	----------
2. New construction and additions	858,000	$1,325,000	$1,325,000
Total	1,143,725	1,325,000	1,325,000

DEPARTMENT OF THE INTERIOR—SOUTHWESTERN POWER ADMINISTRATION

Program summary, fiscal year 1961

Activity and project	Estimated cost	Program, fiscal year 1961
NEW CONSTRUCTION AND ADDITIONS		
Plant interconnection project:		
Table Rock substation	$450,000	$450,000
System metering, relay and communications	25,000	25,000
Total	475,000	475,000
Extension of cooperatives, public bodies and others:		
Clinton substation addition	375,000	375,000
Doniphan and/or Idalia substation addition	285,000	285,000
Total	660,000	660,000
General plant and equipment	70,000	70,000
Administration and engineering	120,000	120,000
Total new construction and additions	1,325,000	1,325,000
Total—Construction	1,325,000	1,325,000

JUSTIFICATION

CONSTRUCTION, $1,325,000

New construction and additions

Plant interconnection projects

Table Rock substation 161/69 kilovolt (item 3), $450,000.—Construction of a 161/69-kilovolt stepdown substation adjacent to the Table Rock powerplant is required to deliver power and energy to the transmission system of the KAMO Power Cooperative and to other REA distribution cooperatives serving the rapidly developing areas adjacent to Table Rock Reservoir. Much of this power must now be delivered over transmission and distribution circuits from our Springfield substation. Installation of this stepdown transformer capacity will therefore relieve the contemplated overload of Springfield transformers and defer a transformer addition at that station.

System metering, relay and communications, $25,000.—Funds in the amount of $25,000 will be required during fiscal year 1961 to provide for certain modifications to load control equipment at the Springfield load dispatching office required with the completion of additional hydro generating units by the Corps of Engineers in this control area. These funds will also provide for the initiation of a program of replacement and modernization of VHF radio equipment to conform with the new narrow band requirements of the Federal Communications Commission.

Extensions to cooperatives, public bodies, and others

Clinton substation addition No. 3 (item 4), $375,000.—Funds are required in the amount of $375,000 to provide for an increase in 161/69 kilovolts transformer capacity at the Clinton substation to implement a contractual arrangement with the Missouri Public Service Co. and permit the full integration of their transmission system with that of the Government. The existing facilities at Clinton are capable of delivering approximately 10,000 kilowatts of capacity, hence the need for additional facilities to deliver up to the 30,000 kilowatts of peaking capacity contemplated by the contract.

Doniphan and/or Idalia substation addition No. 1 (item 5), $285,000.—Funds are required in the amount of $285,000 to provide additional 161/69 kilovolts transformer stepdown capacity to serve the M. & A. Power Cooperative and the cities of Sikeston and Poplar Bluff who secure delivery of power and energy from the Government over the M. & A. transmission system. Estimated power requirements for 1963 loads for these customers indicate the existing transformer capacities at our Doniphan and Idalia substations will be inadequate. System studies are now being made by the cooperative to determine if this additional capacity will be required at Doniphan or at Idalia, or both, or at an additional point of delivery now under network analyzer study on the Norfolk-Doniphan 154-kilovolt line near Pocahontas, Ark.

General plant and equipment, $70,000

These funds are requested to continue a program started in fiscal year 1960 of replacement of automotive vehicles other than passenger carrying, which are utilized in the maintenance and operation of the Administration's transmission lines and substations. Much of the remainder of this equipment will have been in service over 10 years and its continued use will not be up to required standards for dependability and personnel safety. This estimate also includes funds for the acquisition of material and equipment required in the normal process of operation and maintenance of the transmission system. Minor modifications and necessary improvements to existing facilities not covered by specific budgeted items are to be provided from these funds.

Administration and engineering, $120,000

This estimate covers the cost of personal services, travel, and other objects in connection with the construction program for fiscal year 1961.

Tabulation by activity showing fund requirements for personal services, travel, other objects, plant and equipment, and projects follows:

Itemization of estimate

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing:			
Total obligations	$1,143,725	$1,325,000	+$181,275
Obligations by objects:			
01 Personal services	103,000	95,000	−8,000
02 Travel	13,000	15,000	+2,000
03 Transportation of things	4,000	4,500	+500
04 Communication services	500	500	
06 Printing and reproduction	4,000	5,000	+1,000
07 Other contractual services	23,225	25,000	+1,775
08 Supplies and materials	300,000	315,000	+15,000
09 Equipment	177,500	205,000	+27,500
10 Land and structures	514,500	655,000	+140,500
11 Grants, subsidies and contributions: Contributions to retirement fund	4,000	5,000	+1,000
Total obligations	1,143,725	1,325,000	+181,275

DEPARTMENT OF THE INTERIOR—SOUTHWESTERN POWER ADMINISTRATION

Operation and maintenance

Appropriation Act, 1960		$1,121,250
Total available, 1960		1,121,250
Increases:		
System operation and maintenance	$69,000	
Power contracts and rates	12,000	
General administration	47,750	
		128,750
Budget estimate, 1961		1,250,000

Analysis by activities—Operation and maintenance

Activities	Amount available, 1960	Estimate, 1961	Increase
1. System operation and maintenance	$731,000	$800,000	$69,000
2. Power contracts and rates	88,000	100,000	12,000
3. General administration	302,250	350,000	47,750
Total	1,121,250	1,250,000	128,750

OPERATION AND MAINTENANCE

GENERAL STATEMENT

The estimate of $1,250,000 for the operation and maintenance program for fiscal year 1961 provides for operating and maintaining the transmission system, carrying on power-marketing negotiations, providing customer services, and administering the contracts between the Administration and certain generating and transmission cooperatives.

The 1960 fiscal year appropriation of $1,121,250 was carried out as follows: System operation and maintenance, $731,000; power contracts and rates, $88,000; and general administration, $302,250.

The estimate for fiscal year 1961 of $1,250,000 includes the following activities and amounts: System operation and maintenance, $800,000; power contracts and rates, $100,000; and general administration, $350,000.

The increase of $128,750 is distributed by activity as follows: System operation and maintenance, $69,000 for an additional line crew, two instrument repairmen, a draftsman and an engineering aid employed during the latter part of fiscal year 1960, and two substation operators to be employed in fiscal year 1961. Power rates and contracts, $12,000 for a public utility specialist, and the filling of vacant positions during the current year. General administration, $47,750, provides for additional personnel in the division of administrative services and sufficient funds to finance the administrative staff from the "Operation and maintenance" appropriation for the entire year.

JUSTIFICATION

System operation and maintenance, $800,000

$800,000 is requested for operation, maintenance, and engineering for fiscal year 1961, an increase of $69,000 over fiscal year 1960.

This activity includes the dispatching of power from nine hydroelectric generating plants in the southwest power area, maintenance of 1,061 miles of high-voltage transmission lines, seven substations, eight switching stations and appurtenant facilities. This system interconnects the Administration's hydroelectric power facilities with generating and transmission cooperatives and private utility systems in the southwest area, to obtain maximum benefits from integration of hydroelectric and thermal generation.

To insure continuity of service and assure reliable service to its customers the operation, maintenance, and engineering of the Government's integrated system,

it is necessary to maintain a staff of engineers, maintenance crews, and operations personnel.

Three line-maintenance crews have maintained the Administration's lines through fiscal year 1959, with a fourth crew to be added in fiscal year 1960, upon completion of the Springfield-Table Rock Dam line. These crews are stationed at strategic points along the 1,061 miles of high-voltage line to be able to best perform their duties with the least amount of travel. The new crew is to be stationed in the Springfield area to maintain the Mansfield-Springfield-Carthage line and the Springfield-Table Rock Dam line, a total of 138 miles. This location, due to other facilities located in the Springfield area, is the most economical for the maintenance of present facilities. The three crews employed during fiscal year 1959 are located at Ada and Muskogee, Okla., and Doniphan, Mo. These locations were selected, giving consideration to accessibility to systems to be maintained, communications, terrain, transportation, and housing. These crews maintain a total of 923 miles of line extending from Payne, Tex., near the Denison Dam to Idalia, Mo., in the southeast corner of Missouri.

Two substation maintenance crews perform the maintenance of the substations, switching stations, meters, relays, electrical and electronic equipment. Two additional instrument repairmen are to be employed during fiscal year 1960.

During fiscal year 1960, 13 additional employees are to be employed in this activity. This includes an additional line crew of seven to be added in the fourth quarter, two instrument repairmen in the third or fourth quarter, two engineers in the fourth quarter, an engineer and a draftsman as early as possible.

During fiscal year 1961, two substation operators are needed, one for the Clinton substation and one for the Gore substation. The increased costs for personal services during the budget year are estimated at $67,000 to finance the 13 positions added during the latter part of fiscal year 1960 and the substation operators added in the budget year. Increase in travel is estimated at $2,000, making a total increase of $69,000.

Additional passenger cars requested in the 1961 fiscal year are for the additional line crew and the instrument repairmen added in fiscal year 1960. No increase in funds is estimated for the purchase of these two cars, as anticipated savings in other objects are expected to absorb the increase.

Power contracts and rates, $100,000

$100,000 is required in fiscal year 1961 to perform the functions related to power contracts and rates. This is an increase of $12,000 over the amount available during fiscal year 1960. This amount is needed for the financing of one additional position added during fiscal year 1960, for the entire fiscal year 1961, for increased travel and for additional funds in other objects.

Power contracts and rates activity carries out the negotiation of contracts with preferred customers, public bodies, and private utility companies for the purchase, sale, interchange of electric power and energy, and for wheeling of Government power over the various transmission systems in the area. Analyze power rates to insure sufficient revenue to amortize the Government investment. Calculate rates and prepare payout studies for submission to the Federal Power Commission for approval. Performs customer service in connection with all contractual agreements.

The Branch of Customer Service performs service functions required on existing contracts, negotiates new contracts and amendments.

General administration, $350,000

An increase of $47,750 in this activity is required for fiscal year 1961 over the amount provided for fiscal year 1960.

Functions included in this activity are executive direction, management, inspection and audit, personnel, fiscal services, budget, administrative services, office services, legislative functions, and public relations.

The increase provides additional personnel in this activity to perform functions required by the Department of the Interior in connection with inspection, internal audit, and employment practices. There is also provided personnel in line with Civil Service Commission recommendations. The current year funds are insufficient to provide adequate personnel to properly perform the current workload within time limits required for submitting reports, information, and other data requested by various sources. The present staff cannot perform required functions of inspection, audit, and safety and maintain an efficient operation of other duties. Backlogs exist in the Branch of Budget and Finance and in the Branch of Office Services: additional employees are

needed in both branches to remedy a situation created through lack of sufficient funds.

Personnel to be recruited during the latter part of fiscal year 1960 which will require funds for the entire year during fiscal year 1961 are safety officer, personnel assistant, stock-control clerk, and two clerk-stenographers. Also, two accounting clerks to fill present vacancies are to be recruited. One additional accounting clerk is to be added during fiscal year 1961. Included in the increase are sufficient funds to finance administration expenses entirely from the "Operation and maintenance" appropriation. It was necessary to finance approximately $22,000 from the "Construction" appropriation during fiscal year 1960.

Itemization of estimate

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing: Appropriation act	$1,121,250	$1,250,000	+$128,750
Obligations by objects:			
01 Personal services	852,250	965,000	+112,750
02 Travel	107,000	107,000	
03 Transportation of things	1,500	2,000	+500
04 Communication services	22,000	22,000	
05 Rents and utility service	17,000	18,000	+1,000
06 Printing and reproduction	6,000	6,000	
07 Other contractual services	24,000	36,500	+12,500
08 Supplies and materials	39,000	40,000	+1,000
09 Equipment	4,500	4,500	
11 Grants, subsidies, and contributions: Contribution to retirement fund	44,000	45,000	+1,000
13 Rewards, awards, and indemnities	2,000	2,000	
15 Taxes and assessments	2,000	2,000	
Total obligations	1,121,250	1,250,000	+128,750

DEPARTMENT OF THE INTERIOR—SOUTHWESTERN POWER ADMINISTRATION

Continuing fund

Appropriation act, 1960	$5,000,000	
Emergency authorization	45,000	
Amount available, 1960		$5,045,000
Decreases:		
Rental for use of transmission facilities	22,000	
Emergency expenses	45,000	
		67,000
Base, 1961		4,978,000
Increases: Purchase of energy and wheeling charges		22,000
Budget estimate, 1961		5,000,000

Analysis by activities—Continuing fund

Activities	Amount available 1960	Estimate, 1961	Increase
1. Purchase of energy and wheeling charges	$4,092,000	$4,114,000	$22,000
2. Rentals for use of transmission facilities	908,000	886,000	
3. Emergency expenses	45,000		
Total	5,045,000	5,000,000	22,000

JUSTIFICATION

CONTINUING FUND

Power purchases, wheeling charges, and rental of facilities, $5,000,000

The estimate of $5,000,000 for fiscal year 1961 is a decrease of $45,000 under the $5,045,000 available for fiscal year 1960. The 1961 estimate includes $4,114,000 for the activity "Purchase of energy and wheeling charges," an increase of $22,000 over the $4,092,000 available for fiscal year 1960; $886,000 for the activity "Rentals for use of transmission facilities," a decrease of $22,000 under the $908,000 available for fiscal year 1960; no amount is included in the 1961 fiscal year for "Emergency expenses," a decrease of $45,000 under the amount available for fiscal year 1960.

During fiscal year 1960, $45,000 was used from the continuing fund for emergency brush control due to the heavy growth of brush and trees in some areas on the rights-of-way. This action was necessary to insure continuity of service, and could not be financed from the regular "Operation and maintenance" appropriation.

There is no change in the estimated expenditures in fiscal year 1961 as compared to fiscal year 1960. Changes in contractual arrangements during the year result in a decrease of purchases of power and wheeling charges and rental of facilities of $103,000. Estimated gross sales during the year decrease $453,000, resulting in a $350,000 decrease in receipts during fiscal year 1961. Estimates for fiscal year 1961 are based on an average between a normal water year and a critical water year.

Obligations to be incurred during the fiscal year 1961 under the continuing fund are based upon contractual arrangements for the purchase and sale of power, including wheeling charges for transport of power, with private utilities and municipalities in the area, and for the purchase of power and lease of transmission capacity from power cooperatives in the area. Estimated fund requirements by activities and by utility company or cooperative are as follows:

	Purchase of energy and wheeling charges	Rental for use of transmission facilities	Total
1. Central Electric Power Cooperative	$1,016,000	$416,000	$1,432,000
2. NW. Electric Power Cooperative, Inc.	1,087,000	470,000	1,557,000
3. Western Farmers Electric Cooperative	1,567,000		1,567,000
4. Oklahoma utility companies	314,000		314,000
5. Texas Power & Light Co.	119,000		119,000
6. Others	11,000		11,000
Total	4,114,000	886,000	5,000,000

GENERAL STATEMENT

Mr. WRIGHT. I have a very brief summary statement.

Southwestern Power Administration is very happy to appear before this committee and present our budget estimates for the coming year.

Our budget estimate for construction is $1,325,000. This provides for the construction of a substation adjacent to the Table Rock powerplant, increase in capacity in present substation facilities at Clinton and Doniphan and Idalia, Mo., and the modification of the load control equipment at Springfield, Mo., substation, and modernization of the very high frequency radio equipment for general plant and equipment.

The budget estimate for operation and maintenance is $1,250,000, which will enable this Administration to operate and maintain its transmission system and carry on its power marketing negotiations, provide customer services and administer the power sales and exchange contracts between the Administration and its power customers and other electric systems.

The budget estimate for the continuing fund of $5 million is requested for the purchase of power and payment of transmission service and of wheeling charges and for the leasing of transmission capacity under contractual agreement with certain generating and transmission cooperatives.

The construction estimate of $1,325,000 provides, in effect, for increased capacity at substation units in our general system to enable the capacity of Table Rock Dam, which is coming in to be delivered through the transmission system.

For example, substation initial units were put in of a size much less than the capacity of the transmission lines because they weren't needed until the transmission lines became loaded. So as Table Rock Dam comes in with 200,000 kilowatts of capacity at the border of Arkansas and Missouri, we have to move additional power into Missouri, and additional power into Arkansas, and we also have requests for interconnections at Table Rock.

We are somewhat more fortunate than Bonneville in that we not only are able to market all of the power we have, but all of the power we can get, buy, beg, steal or borrow.

INCREASED CAPACITY AT TABLE ROCK

Chairman HAYDEN. When will Table Rock come in?

Mr. WRIGHT. We have been using it partially, Senator, for the last 6 months. It is in the process of filling, which of course had quite an effect on our total operations, taking millions of acres of feet of water that would normally have run on through Bull Shoals powerplant. The filling process has adversely affected our normal power operations, but once full that storage is above the Bull Shoals generators and dam, so that the corps will now add additional generators at Bull Shoals Dam, and when the Beaver Dam comes in will add two more generators, changing that capacity from 160,000 to 340,000 kilowatts.

Chairman HAYDEN. Three dams use water from the same source?

Mr. WRIGHT. Again and again and again; yes, sir.

In other words, we are now getting the economies of multiple river basin utilization.

AMOUNT OF RAINFALL

Chairman HAYDEN. How has the rainfall been with respect to filling the dam?

Mr. WRIGHT. Very good. We are very lucky. We are about 87 percent full on all reservoirs now and we are gaining about 1 percent every week. We expect to be full this spring, and we have to stay that way to meet the power obligations that we have through the year 1962.

Chairman HAYDEN. What do the climatic records indicate? That is, are the rainfall records such that you can depend upon having full reservoirs all the time?

Mr. WRIGHT. No, sir; they do not. But we are operating on a full rule curve operation. Thanks to our integration with other systems, we are able to utilize offpeak and other types of energy during the year to maintain our full reservoirs and from an economic point of view we get $14.40 a kilowatt-year for capacity and we get 2 mills a kilowatt hour for energy, so the real money is in maintaining your capacity.

Chairman HAYDEN. That is right.

Mr. WRIGHT. So the water you do have flows through a much larger head all the time. We have been very successful in this type of operation.

INTEGRATION OF PROJECT

I am always happy to report to you we are fully integrated with nearly every one in the Southwest now and contractual negotiations underway will complete integrations in every State down there.

Chairman HAYDEN. That has been a long story.

Mr. WRIGHT. Yes; it has, a long story but a very happy ending which none of us, I think, ever anticipated.

The budget this year, for operation and maintenance, of $1,250,000 will mean that at the end of the year we will reach about a stabilized operation and maintenance level.

We are adding a fourth crew to take care of the additional lines that have come in from construction previously authorized by the Congress. When we do that, and we will have the crew on at the end of this year, then our operation and maintenance level is about $1,250,000 a year and we anticipate that Southwestern Power's operation and maintenance budget will stabilize at about this level in the future.

Chairman HAYDEN. Now, as to——

Mr. WRIGHT. An interesting question, excuse me, sir.

REPAYMENT SCHEDULE

Chairman HAYDEN. As to repayments, how long is it going to take to pay this out?

Mr. WRIGHT. The repayment schedule is based on 50 years at 2½ percent interest.

Chairman HAYDEN. I see.

Mr. WRIGHT. Fifty years from the time each unit is placed in the system.

A comparison that you inquired about of one of the other agencies a moment ago, we have compared our operation and maintenance appropriation with the capital investment in our system over a period from 1951 to 1961, and we find that we are stabilizing at about 4½ percent, it costs us but 4½ percent for operation and maintenance compared with our capital investments.

Originally it cost us 10.5 percent. So we have now hit what we think is the operating level.

We find also that in our relationship with other people that operation and maintenance stabilizes at between 4 and 5 percent.

So we think we have come to the stable operation.

The $5 million from the continuing fund is $45,000 less than asked for last year. That also is based on about a halfway between an average water year and the worst water year you might anticipate, and this particular year we are in now we will save about $955,000 out of the continuing fund allowance last year, in other words, this is not an appropriation, it is an authorization not to spend more than that out of revenue.

Chairman HAYDEN. That's right.

Mr. WRIGHT. We are going to spend a little over $4 million, about $4,050,000 instead of $5 million in the current year because of good water conditions. We may have an equal advantage in the following year but we are sure that $5 million is enough to carry our obligation.

Furthermore, in the contractual arrangements we are now making we do not anticipate that this continuing fund requirement will become larger. We anticipate it will become smaller. I think that is very good news for this committee, because I assured you of that many years ago, and I am sure the committee will be grateful that we are accomplishing it.

There are several very other interesting things, I think you should know about the Southwest. The program we have followed down there of complete integration with all existing systems has resulted in three amazing things.

PERCENTAGE TO PREFERENCE CUSTOMERS

First off, the national average of Federal power that goes to preference customers is about 30 percent. In the Southwest in 1958 67 percent of all the power we had went to REA cooperatives, about 9 percent of it went to municipalities, 24 percent of it went to aluminum plants, and 1 percent went to power companies.

So that what we have done has resulted in 76 percent of our power going to preference customers in the Southwest.

We are utilizing something in the order of $200 or $300 million worth of transmission facilities, and we have invested only $27 million in transmission lines ourselves.

In addition to that, we made a study which I would like to show you very briefly. We have plotted the effective rates from power companies to REA cooperatives all over the United States from 1942 until the present time. You will find that out of the lowest 20 companies in the United States 16 of them are interconnected with Southwestern Power Administration.

NATIONWIDE RANKING

Our rate is the 20th lowest rate in the country. Southeastern Power has 2 or 3 companies in this top 20 with which it is affiliated and Bonneville has 1.

The rates for these companies have stabilized almost exactly in accordance with the fuel requirements of these companies. So that instead of destroying or harming anybody, we have enabled the companies to stabilize their rates at about 30 or 40 percent lower than they were when we started operating. All of them like the arrangements.

All of them are eager for as many similar arrangements as we are able to provide. We think it is good and and we didn't do this as a

yardstick, because we have one of the highest rates. We did it by having integration which permitted everybody to participate in the program and still get the job done. Out of the top 10—and we like to talk of top 10 in Oklahoma football—out of the top 10 there is only 1 company in the United States that is not affiliated with Southwestern Power, that is they have the lowest rates in the country to REA cooperatives. We think this is an amazing piece of information.

Chairman HAYDEN. That is remarkable.

DEVELOPMENT OF LAWNMOWER

Mr. WRIGHT. One other thing I think would be interesting to the committee. We have developed in the Southwest or there has been developed down there a lawnmower which clears transmission right-of-way. I have some pictures of right-of-way we have just worked on. It has a very tremendous advantage in this work in that it crushes the brush to the point where spray absorption is tremendous, after you have cut it, you can spray it and there is so much exposed ragged pieces to the roots that spraying is several times as effective as it is with normal brush control and I thought the committee would be interested learning about this.

Chairman HAYDEN. You use a spray that prevents reproduction?

Mr. WRIGHT. Yes, and the effectiveness of the spray depends upon absorption. When you shatter and crush the remainder of the stumps like this machine does, the absorption from the spraying is very large.

Chairman HAYDEN. It doesn't look like a very heavy or a very expensive piece of equipment.

Mr. WRIGHT. It isn't, but we had an awful time persuading our own people to try it. They were convinced it would not do it.

Chairman HAYDEN. What kind of an inventor did you find?

Mr. WRIGHT. We found in south Texas that pipeline companies and other people were using this thing. They call it—one name is a Brushmaster, and they have a half dozen variations of the machine depending upon what you want to use it for, but we saw the effectiveness of it there, and finally got trial of it on our own right-of-way and it is cutting our costs of maintaining right-of-way very materially. We find we are comparing favorably with anybody in the United States now.

Chairman HAYDEN. That is fine.

Mr. WRIGHT. That completes my statement, Mr. Chairman. I am very proud to report to you that Southwestern Power is in good shape. We still have a few problems, I think.

PRESENT AND FUTURE PROJECTS

I don't think our rate structure as between our grid rate and our load center rate has yet reached its final stage. I think there have to be some adjustments of it. I think we will have problems meeting our obligations as we go along because many high cost projects are being brought in, and under the present cost allocation methods, the better you market this power the more it is worth so greater benefits are assigned to power in the projects. I think the committee would be interested in knowing that we have nine projects on the line now, and five more under construction, totaling $837,929,750, and of that power will

repay 49.8 percent or nearly half, and the only other repayment out of it is about 5 percent for water supply.

So that power and water supply will pick up roughly 50 percent of the total cost which approximates a billion dollars in these projects in the Southwest.

Chairman HAYDEN. And the other benefit of course is the controlling of floods.

RECREATION

Mr. WRIGHT. And navigation and one we don't consider, recreation: I would like to say something about that. The largest attended national park in the world is Lake Texoma by almost 2½ times and if it is worth the price of one Coca Cola per person to go to Lake Texoma, it is worth more than the power I get out of it.

So that I think recreation, certainly in the Southwest, has increased revenues and taxation and improved the country by installation of these projects to an extent which is impossible to describe.

Chairman HAYDEN. It has been a very remarkable development.

Tell me how long ago was it that you first appeared before this committee representing this Southwestern?

Mr. WRIGHT. 1943.

Chairman HAYDEN. Your face is familiar. [Laughter.]

Mr. WRIGHT. I might say I have had the pleasure of knowing the chairman of this committee since 1933 when I was a boy-faced engineer and had the pleasure of working on many projects in Arizona, like Lone Pine Dam, and Buckeye Irrigation District. Also I was born and raised in New Mexico and I have a love for Arizona and what you have done for the Southwest that is beyond description, Mr. Chairman.

Chairman HAYDEN. Well, thank you, sir. We are glad that you could come today.

Mr. WRIGHT. Thank you.

COMMITTEE RECESS

Chairman HAYDEN. The committee will stand in recess until 10 o'clock Monday morning.

(Whereupon, at 10:45 a.m., Friday, April 29, 1960, the hearing was recessed, to reconvene at 10 a.m., Monday, May 2, 1960.)

PUBLIC WORKS APPROPRIATIONS FOR 1961

MONDAY, MAY 2, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden, (chairman), presiding.

Present: Chairman Hayden, Senators McGee, Young, and Mundt.

Also present: Senators Mansfield, Brunsdale, and Murray.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

COMMITTEE STAFF PERSONNEL CHANGE

Chairman HAYDEN. The committee will come to order.

I would like to make an announcement concerning the committee staff. For a number of years, Mr. William W. Woodruff has served as clerk of the Department of the Interior Subcommittee and this subcommittee. However, he will be leaving the committee at the close of this session of Congress to accept a position with a major utility company.

Mr. Paul Eaton, who has served as my administrative assistant for a number of years, will replace Mr. Woodruff.

MONTANA PROJECTS

STATEMENT OF HON. MIKE MANSFIELD, A U.S. SENATOR FROM THE STATE OF MONTANA

EAST BENCH UNIT PROJECT

Senator HAYDEN. Senator Mansfield, we are pleased to hear from you.

Senator MANSFIELD. Thank you, Mr. Chairman. I am sorry to note that Mr. Woodruff is leaving the committee because I think he has been a source of strength not only to the committee but to those of us, the individual members, who have an interest before this committee.

Mr. Chairman, it is a pleasure to be here this morning with my distinguished colleague, the senior Senator from Montana, Mr. Murray, in support of funds for reclamation projects in our State and the Missouri River Basin. I also plan to say just a few words in support of Corps of Army Engineer projects which are also included in this appropriation bill.

54770—60——17

The budget requests for the Bureau of Reclamation include funds for a number of projects which are of great importance to the Treasure State.

The first project I wish to discuss under the Bureau's construction and rehabilitation program is the East Bench unit in Beaverhead County. This project has had my support for many years and last year I was very pleased when the Congress appropriated sufficient funds so that work and planning could be started on this project.

Chairman HAYDEN. It has been long delayed.

Senator MANSFIELD. But there is another one, longer delayed which I will get to shortly.

CLARK CANYON DAM PROJECT

It was vital at the time because of necessary highway and railroad relocation. If the $2,800,000 requested for this project is approved the Bureau can start soon on the construction of the railroad relocation. This construction is coordinated with the proposed relocation of U.S. Highway No. 91. These relocations must precede construction of the major facilities. Some of the design data and the right-of-way acquisition will be taken care of during fiscal year 1961 and I understand actual construction on the Clark Canyon Dam is scheduled for early 1962.

The construction of this $20,840,000 irrigation project will increase the productivity of thousands of acres of land and these acres will not contribute to increased surpluses. I refer you to the following statement made by the Commissioner of the Bureau of Reclamation, Mr. Dominy, in a speech he delivered in Montana last month. He referred to questions which are often asked as to the advisability or necessity of adding acreage to our irrigated areas in the present time of crop surpluses, and concluded that, "actually, irrigation frees farmers from the fetters of a one-crop economy by permitting diversification. There is no long-lasting or critical surplus problem in meats, vegetables, and fruits."

This project will bring new employment to the Beaverhead area. It will increase retail and wholesale business in the Dillon-Butte area and it will increase the taxes on farm property which I am told will amount to an additional $50,000 annually. Congressman Lee Metcalf joins Senator Murray and me in expressing wholehearted support for the $2,800,000 request for East Bench.

WEST BENCH UNIT PROJECT

While I am discussing reclamation development in the Beaverhead I would like to direct the attention of the subcommittee to the desirability of another project in this area—the West Bench unit. This irrigation project received a very favorable recommendation in the basin report on the Three Forks Division and I want to join my colleagues in urging that funds be provided for immediate detailed investigations of that unit.

The Bureau has reported that they—

are aware of the need for supplemental water to the West Bench unit and of the desire of the water users for the necessary detailed studies to be made.

It is my sincere hope that the limited funds available for this project can be increased so that these detailed studies can proceed.

HELENA VALLEY UNIT PROJECT

Mr. Chairman, I want to again express my support of the Helena Valley unit in the vicinity of the State capital and to express my appreciation for the way the work has proceeded on this project. It is my understanding that the project works are scheduled to be advanced to a point where water deliveries can be made to the entire acreage in the district by the end of fiscal year 1961.

YELLOWTAIL DAM PROJECT

I know I need not express my pleasure concerning the Bureau of Reclamation's request for $2,500,000 to begin construction on Yellowtail Dam in southeastern Montana and Wyoming.

The prospectus given to me indicates that the first year program provides for the award of the contract and the start of construction of Yellowtail Dam, construction facilities, temporary camp, and access roads. Excavation for the foundation of the dam is to be started and preconstruction work will be performed for the powerplant and switchyard.

On many occasions I have discussed the great potential that this multipurpose project holds for Montana and Wyoming. It will be a great boost to the economy of the area. Besides the flood control, recreation, and fish and wildlife benefits, this project will provide a new source of hydroelectric power in an area which may soon be facing some serious shortages. It will provide an incentive for industrial expansion. In addition it will make a great contribution for the Missouri River Basin.

GENERATING CAPACITY

The Yellowtail powerplant will have four generating units of 50,000-kilowatt capacity each, making total plant nameplate capacity of 200,000 kilowatts. The average annual power production for the first 50 years of operations is understood to be estimated now by the Bureau of Reclamation as 711 million kilowatt-hours, consisting of 508 million kilowatt-hours firm power, 195 million kilowatt-hours nonfirm power, and 8.5 million kilowatt-hours irrigation pumping power.

The Yellowtail powerplant is designed and it will be operated to take advantage of its capability for peaking to support the integrated Missouri River Basin project power system. The regional director's 1954 report stated:

*** * * peaking power is at a premium in all the Missouri River Basin system * * ***

*** * * It is evident, however, that the Yellowtail plant, due to the high head available and the economic advantage of installing short penstocks, afforded an ideal site at which to install additional generating capacity to assist the integrated power system in the production of salable firm energy. Some of the energy produced by other prospective powerplants will not fit under the firm powerload of the integrated system and would necessarily be sold only for its offpeak energy value. The additional assured capability of Yellowtail permits the sale of much of this type of energy as firm power over the interconnected system.**

Design of the powerplant was based on operating the reservoir at sufficiently high levels to assure full peaking capacity from the powerplant at practically all times * * *

* * * inasmuch as the Yellowtail powerplant is designed to provide system peaking and consequently has a higher kilowatt installation than normally required to dispose of the firm energy, it is assumed that all firm energy will be sold under the 3.5 mill block of the schedule of rates. The revenues for firm energy were therefore calculated on the basis of $9 per kilowatt and 3.5 mills per kilowatt-hour.

CONTRIBUTION TO MISSOURI RIVER POWER SYSTEM

The Yellowtail powerplant thus contributes to the Missouri River power system far more than the atsite power. In fact, firming of the other plants probably is a greater asset to the system than the Yellowtail firm power itself, and it is probably worth a good deal more in revenues than is indicated by the calculation of Yellowtail revenues. No Bureau of Reclamation study has been available to show the amount of system power that will be firmed by Yellowtail peaking capacity, or the dollar value of the increase in system revenues that can result from this.

MONTANA POWER RESERVE

The economic expansion and well-being of the State of Montana is dependent upon a reservation of power generated within the confines of the State for use within the State. I expressed my views on this subject in some detail in a Senate speech a year ago. I again want to bring this to the attention of the subcommittee. My colleagues, Senator Murray and Congressman Metcalf and I feel that what is created in our State should first benefit those who live in the State and and then we are most willing to cooperate to the best advantage of the entire Nation. I think that this is a philosophy which each and every Senator and Representative would want to apply to his State.

At the appropriate time I intend to request congressional action, providing a Montana-Wyoming preference for all the power and energy contributed to the integrated upper Missouri River project power system for use within these two States.

This concludes my comments on Yellowtail Dam and before I turn to small Bureau projects I first want to say that I hope that this committee will give wholehearted approval and endorsement of this project, appropriating $2,500,000 to begin construction in fiscal year 1961 on the Yellowtail unit.

I want to express my personal thanks and the thanks of Senator Murray and the rest of the delegation for the approval given by this committee to this project in the last two sessions, even though there was no recommendation of approval given by the Bureau of the Budget.

Chairman HAYDEN. We felt it was an entirely meritorious project and one which private enterprise could not possibly undertake because the flood control costs of the dam were so great.

Senator MANSFIELD. I do not want to take up much more of the subcommittee's time but I do want to express my support of funds being requested for the following projects. Congressman Metcalf has asked that his support also be associated with these items.

FORT PECK-DAWSON COUNTY TRANSMISSION LINE

The $450,000 being requested for the continued construction of the 105-mile Fort Peck-Dawson County 230-kilovolt steel-tower transmission line and its associated facilities will permit completion in

Dawson County. I understand that power from the second powerplant at Fort Peck will be transmitted by these new additions late in the year.

Crow Creek Pumping Unit

The Bureau's fiscal year 1961 program will provide continued drainage construction, in the amount of $30,000, on the Crow Creek Pumping Unit. Work will be continued on settlers' assistance, which includes work connected with farm units and negotiations with the water users on repayment.

Other Projects

In the area of planning I understand the Budget has requested sufficient funds to complete the general planning studies on the Yellowstone Division and the continuation of detailed investigations on the Jefferson Unit. Also funds will be made available for the completion of the feasibility report on the McNamara Dam and powerplant of the Blackfoot River project.

Hungry Horse Dam and Milk River Project

The operations and maintenance program for 1961 includes funds for two important projects in Montana: Hungry Horse Dam, $666,000; and the Milk River project, $18,351.

The Bureau of Reclamation has a fine record in Montana and the West, in fact I would say that it is one of the major forces behind the economic development of the Western States. The Bureau's budget requests have my complete support insofar as the Missouri River Basin is concerned, in fact I am sure that the members of the subcommittee know that I would be even happier with some increases. This is not reckless spending, but an investment in the future of our Nation.

Mr. Chairman, I realize that the hearings on the Corps of Army Engineers items have been concluded but I would like to express my support of two items today.

Fort Peck Dam Project

At the end of calendar year 1959 the second powerplant at Fort Peck Dam was 60 percent completed. The $4,500,000 being requested this year will bring the two power units into service in 1961, increasing the installed hydropower capacity at Fort Peck Dam to 165,000 kilowatts.

As all of us in the Senate are aware, my senior colleague, Senator Murray, is noted for being a pioneer, a man of vision and a great force in water resource development. Recently Senator Murray began looking into the possibility of developing the Missouri River above Fort Peck Dam in Montana. Preliminary inquiries indicate that there is a potential of 600,000 kilowatts awaiting development between Fort Peck and Great Falls.

These projects would be truly multipurpose in their benefits. I wish to join with Senator Murray in requesting that an additional $40,000 be granted to the Corps of Army Engineers so that they could proceed with the first year of a 4-year study which I understand will cost $200,000. More detailed information concerning this project will

be placed in the record but I did want to express my support of this proposed development with unlimited possibilities.

This concludes my statement, Mr. Chairman.

I would like to say that in view of the fact that my distinguished colleague, Senator Murray, who has announced his retirement from the Senate at the end of this term which will be completed on January 3 next year, that it would be a fitting memorial if at long last, after 16 years, we could finally get the $2.5 million needed to get Yellowtail under construction and if we are successful in our attempt this year, which I must reiterate meets with the approval of the administration and the Bureau of the Budget, then I think a further fitting memorial to my distinguished colleague would be to consider the possibility of naming this project in his honor.

That is all I have to say, Mr. Chairman.

Chairman HAYDEN. Thank you, Senator Mansfield.

Senator Brunsdale.

NORTH DAKOTA PROJECTS

STATEMENT OF HON. NORMAN BRUNSDALE, A U.S. SENATOR FROM THE STATE OF NORTH DAKOTA

General Statement

Senator BRUNSDALE. Mr. Chairman, I am Norman Brunsdale, Senator from North Dakota. I am pleased to have the opportunity to appear here and support the program of work on the Garrison diversion unit in my State as proposed by the Bureau of Reclamation in fiscal 1961, as well as other activities in the Missouri River Basin which affect North Dakota.

I wholeheartedly favor approval of the entire $2 million estimate for investigations and advance planning of the Missouri River Basin project. Included therein is $450,000 for continuing work programed on the Garrison diversion unit in North Dakota and South Dakota, with special emphasis on preparation of definite plan reports for the service areas. This amount will also permit the completion of reports on the Oakes area and LaMoure section and continuing work on the Warwick-McVille and Karlsruhe areas.

Garrison Diversion Unit Project

The revised and renamed Garrison diversion unit was authorized by the Flood Control Act of 1944 for construction as an initial unit of the Missouri River Basin project. Certain aspects of the unit make some legislative modifications desirable in equity to a few landowners who would be adversely affected by project structures and to clarify the Federal interest in proposed recreational features.

The unit report together with his recommendations was transmitted by the Secretary of the Interior to the Congress on May 3, 1960. Scheduling of hearings thereon by the appropriate committees is anxiously awaited. In the meantime, and notwithstanding any unavoidable delay in holding hearings or obtaining the modifying legislation sought, I believe that investigations and planning work to advance the program should continue. To stop or even slow down such work already underway would appear to be inefficient and costly.

Stopping, restarting, and accelerating a program is not only uneconomical but highly disruptive to orderly and integrated planning of other phases and features of the basin project.

Chairman HAYDEN. That statement can be verified many times by experiences that this committee has had.

Senator BRUNSDALE. I appreciate that.

I therefore most respectfully, earnestly and sincerely plead with you to allow and approve the $450,000 budgeted for the Garrison diversion unit so that work during the ensuing fiscal year may go forward as programed.

Although the Bureau of the Budget in commenting upon the unit report did not recommend favorable action at this time, I feel that its position should not be considered as tantamount to disapproval of the modifications proposed and recommended by the Secretary. Hearings on the report and recommendations, I am confident, will fully justify the development and suggested modifications of the project authorization.

The people of the State are vitally interested in and unanimously support this development. This is demonstrated by the enactment of legislation authorizing 25 counties to levy taxes to help pay construction and operation costs. Seven irrigation districts containing over 316,000 acres of irrigable lands have already been formed and organized. These landowners are now waiting for water to serve their irrigation potentials.

It is pertinent, I believe, to remind the Congress that North Dakota sacrificed in the interest of the Missouri Basin program, 548,000 acres of good farm and ranch land for the construction of the Garrison and Oahe main stem reservoirs. Ultimate construction of the Garrison diversion unit will compensate only in part for the permanent loss of the land and resultant loss of tax revenues.

MISSOURI RIVER BASIN PROJECT

The authorized Missouri River Basin project provided benefits for every State involved. North Dakota was to receive extensive irrigation development, of which the Garrison diversion unit is the major feature. The first 15 years of basin development has emphasized main stem reservoir construction, with benefits from flood control and navigation accruing primarily to lower basin States. Irrigation has not kept pace with other authorized project purposes. Irrigation phases of the basin project, with particular emphasis on development in North Dakota, should proceed as planned in the interest of maximum utilization of the water and land resources, and in equity to our State which has given up and lost so much valuable land to main stem construction features.

I also support and request your approval of the $11,300,000 budgeted for North Dakota activities in the Missouri River Basin project transmission division estimate of $24,415,000. Work programed in the State would provide maximum progress on the 443 miles of transmission lines now under construction. Individually these lines are: Garrison to Jamestown (230 kilovolts), Jamestown to Fargo (230 kilovolts), Jamestown-GrandForks (115 kilovolts) and Garrison-Minot-Rugby (115 kilovolts). In addition, the 99-mile Bismark-Jamestown line No. 2 and the 209-mile Dawson County-Bis-

mark 230-kilovolt lines are scheduled for completion. Substation additions are scheduled for completion at Bismarck, Carrington, Devils Lake and Edgeley and additions will be in progress at Fargo, Grand Forks, Jamestown, and Rugby. Minor additions to the metering and communications systems will be made and installation of tie-line load and frequency equipment will be undertaken.

I wish to express my appreciation to the chairman and members of the committee for the opportunity to make this presentation.

Chairman HAYDEN. We thank you for a very constructive statement, Senator.

Senator BRUNSDALE. Thank you, sir.

BUREAU OF RECLAMATION

STATEMENT OF F. E. DOMINY, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR; ACCOMPANIED BY N. B. BENNETT, ASSISTANT COMMISSIONER FOR POWER AND GENERAL ENGINEERING; W. I. PALMER, ASSISTANT COMMISSIONER FOR IRRIGATION AND PROJECT DEVELOPMENT; A. R. GOLZE, ASSISTANT COMMISSIONER FOR ADMINISTRATION AND FOREIGN ACTIVITIES; B. G. DAVIS, CHIEF, DIVISION OF PROGRAM COORDINATION AND FINANCE; D. R. BURNETT, CHIEF, DIVISION OF PROJECT DEVELOPMENT; G. G. STAMM, CHIEF, DIVISION OF IRRIGATION AND LAND USE; AND D. S. CAMPBELL, CHIEF, DIVISION OF POWER

PROPOSED PROGRAM FOR 1961

Chairman HAYDEN. Mr. Dominy, we are glad to have you.

Mr. DOMINY. Mr. Chairman, it is a pleasure to appear before this committee to discuss Reclamation's proposed program and fund requirements for fiscal year 1961. The work of the Bureau of Reclamation reflects the delegation of a sizable responsibility in connection with the development of water resources of the West. To maintain this responsibility at a reasonable level, six new starts have been included in the budget, four in the construction and rehabilition appropriation and two in the upper Colorado River Basin program.

To carry forward this program in all of its phases in fiscal year 1961, we are requesting an appropriation of $301,479,000, after giving effect to a reduction of $8,500,000, as reported in House Document 356. This compares with enacted appropriations for fiscal year 1960, regular and supplemental, of $256,271,250, or a total increase of $45,207,750 in 1961 over 1960. This increase is distributed as follows: Approximately $5 million for the purchase of foreign currencies under title I of the Agricultural Trade and Assistance Act of 1954, as amended, on which I shall comment later; some $41.5 million represents increases in construction and rehabiltation; operation and maintenance has been increased by $2.8 million and the loan program is up some $7.2 million. Decreases of $11.4 million for the upper Colorado River Basin fund and a small decrease in the general investigations item have resulted in netting the increase to $45 million-plus.

INCREASE IN CONSTRUCTION AND REHABILITATION

A word of explanation concerning the larger increase in construction and rehabilitation is first in order. About half of this increase represents increased requirements for the Central Valley project, attributable to the near peak construction period of the Trinity River Division. Other construction and rehabilitation increases are due to fund requirements of about $4 million for the four new starts and a normal increase in programed work on other projects started in recent years.

The estimate for 1961 is comprised of activities as follows: General investigations, $4,650,000; construction and rehabilitation, $173,950,000; Upper Colorado River Basin fund, $63,100,000 after giving effect to the reduction mentioned earlier; operation and maintenance, $31,900,000; general administration expenses, $4,320,000; loan program, $18,437,000. However, it also includes $4,957,000 for purchase of foreign currencies and small amounts under separate appropriation headings for the disposal of Boulder City, Nev., and Coulee Dam community, Washington, to assist these communities in their transition from Federal to State jurisdiction.

These amounts, if made available, with the carryover funds from the prior year, will permit the Bureau to finance a carefully planned program for all of these activities.

I should like to comment briefly on each of the appropriation items comprising the Bureau's estimate.

GENERAL INVESTIGATIONS

The estimate for 1961 is $4,650,000 as compared to the appropriation for 1960 of $4,668,992. Including carryover funds from prior years and contributions, the program for 1961 is 7 percent less than that for 1960. I should like to point out here that while the estimate for 1961 includes $250,000 for engineering methods and materials research, an activity not included in the "General investigations" appropriation in 1960, the estimate for advance planning amounting to $254,000, formerly carried under "General investigations," has been transferred to the "Construction and rehabilitation" appropriation for fiscal year 1961. These items in effect cancel each other out, leaving the comparison for this appropriation item for 1960 and 1961 on equal terms.

The Bureau's general investigation activities in the 17 Western States and Alaska, except those in the Missouri River Basin, are performed with funds from this appropriation. The Missouri River Basin investigations are part of the "Construction and rehabilitation" appropriation item. Advance planning is also in "Construction and rehabilitation" this year except for the Upper Colorado River Basin items.

The estimate provides for only a minimum program for 1961 if the Bureau is to continue effective its long-range investigation and planning activities.

The special foreign currency program mentioned earlier, which has been identified as a separate appropriation item under "General in-

vestigations," will afford the Bureau an opportunity to avail itself of scientific and research capabilities of certain foreign countries by use of U.S. credits which cannot be used outside of these countries. The work to be done will be supplemental and in addition to the research projects performed in our own domestic laboratories. While we are requesting $4,957,000 in fiscal year 1961, only $1 million is scheduled for expenditure during the budget year, the remainder to be spread over a 2-year period.

Chairman HAYDEN. There is a considerable misunderstanding or confusion about the use of these foreign currencies, and I assume you will go into this matter in detail later.

Mr. DOMINY. Yes, we will, Mr. Chairman.

CONSTRUCTION AND REHABILITATION

The appropriation estimate for this activity for fiscal year 1961 is $173,950,000. This amount, plus $870,750 of prior year funds and anticipated slippage in 1961 of $10 million will provide a total program of $184,820,750; compared with the program for the current year under this heading of $144,755,397. The appropriated funds for this activity will be utilized to finance initial work on four new starts, construction contract earnings and associated costs on work underway at the end of the previous fiscal year, comprising 28 regular projects and 17 units and divisions of the Missouri River Basin project, a program for rehabilitation and betterment on 10 projects, of which 2 are scheduled for completion in fiscal year 1961. Of the total number of projects under construction, nine regular and six Missouri River Basin project units, are grouped under the "drainage and minor construction" category because of their relatively limited programs.

The estimate for 1961 includes $4,173,000 for the initiation of construction on four new starts; Vale project, Bully Creek extenion, Oregon; lower Rio Grande rehabilitation project; LaFeria division, Texas; Almena unit, Kansas; and the Yellowtail unit, Montana and Wyoming, of the Missouri River Basin project. Each of these is vital to the economic development of the area in which it is located. Complete information will be provided when we reach the individual projects on the justifications. There is also included in the estimate $2 mililon for continuation of investigation on the Missouri River Basin project, and $3 million for financing the activities of other Interior agencies participating in the Missouri River Basin multipurpose program.

Continuation of construction during 1961 at the rate provided in the justifications before this committee will result in making available during the fiscal year water for the irrigation of 63,600 acres of new land and 61,200 acres of land now receiving an inadequate supply.

Hydroelectric generating capacity will be increased by 48,000 kilowatts bringing the Bureau-operated total nameplate capacity to 5,201,550 kilowatts.

Of the total appropriation request of $173,950,000, $136,343,100, or 78 percent, will be used to finance work on six projects and three Missouri River Basin units. However, the geographical locations of these projects and units represent a fair cross-section of the Western States in which the Bureau operates.

PROJECTS NEARING COMPLETION

During the current year, we have scheduled for substantial completion the south Gila drainage facilities of the Colorado River front work and levee system; the Fort Cobb Dam and Reservoir and the Fort Cobb municipal and industrial water facilities of the Washita Basin project; the Vega Dam and Reservoir of the Collbran project; and the Howard Prairie Dam and Reservoir, Keene Creek Dam and Reservoir, collection canals, and Green Springs powerplant of the Rouge River Basin project, Talent division; the diversion works and canals of the Middle Rio Grande project; and the storage basin and river pumping plant of the lower Rio Grande rehabilitation project, Mercedes division. Twelve projects in the drainage and minor construction status are also scheduled to be completed.

On the Missouri River Basin project, during the current year we expect to complete the Boysen-Pilot Butte 115-kilovolt transmission line and substations, and Fargo-Grand Forks 115-kilovolt transmission line and substation of the transmission division; and the Fremont Canyon powerplant and switchyard of the Glendo unit. Three units in the drainage and minor construction status are also scheduled to be completed.

Moving into fiscal year 1961, with the funds requested we have programed for completion the pumping plants and the lateral system of the Wellton-Mohawk division of the Gila project; the first section of the Southside Canal of the Collbran project; the Prineville Dam and Reservoir of the Crooked River project; and the Manship Dam and Reservoir, and Gateway Canal and diversion works of the Weber Basin project. Two units in the drainage and minor construction program are also to be completed. On the Missouri River Basin project, also during fiscal year 1961, the Owl Creek unit, the Gray Reef Dam and Reservoir of the Glendo unit, the outlet works extension of the Cedar Bluff Dam of the Cedar Bluff unit, and the Osborne Canal and laterals of the Webster unit are all to be substantially completed. The transmission division of the Missouri River project has scheduled for completion the Bismarck-Jamestown 230-kilovolt transmission line No. 2 and substations, the Fort Peck-Dawson County-Bismarck 230-kilovolt transmission line and substation addition, and the Havre-Shelby 115-kilovolt transmission lines and substations.

The 1961 program for the rehabilitation and betterment of existing projects which have become obsolete or badly deteriorated will require $3,609,000 of the appropriated funds to finance work on 10 projects.

UPPER COLORADO RIVER BASIN FUND

For fiscal year 1961, we are requesting $63,100,000 which, with rather substantial carryover funds from the prior years, due largely to extended labor-management negotiations on the Glen Canyon unit, and initial underfinancing due to anticipated slippage and delays, will provide a sound program for the increasing construction requirements of the Colorado River storage project and participating projects. While we initially estimated an appropriation of $71,600,000, delays in fiscal year 1960 due to the labor-management negotiations primarily, have caused a reduction in that estimate of $8,500,000.

During fiscal year 1961 work will be underway on four units of the storage project and six of the participating projects.

Senator MUNDT. Is that labor-management difficulty on the project or are you talking about the steel strike?

Mr. DOMINY. No, sir; that was a labor dispute on the project itself.

Senator MUNDT. On the project itself?

Mr. DOMINY. They were out on strike from about the 1st of July 1959, until about the 4th of January 1960. It was a 6-month work stoppage there.

Chairman HAYDEN. Has it ever been determined just how costly that was?

Mr. DOMINY. Well, Senator, it has been determined to the extent of the Bureau's ability to determine it.

The contractor, of course, is not happy with the decision that we have made that the 50 cents an hour increase in wages which was agreed to by the contractor in the settlement with the union would not be accepted by us for escalation under the terms of the construction contract.

Just last week, and following receipt of the opinion of the Comptroller General, the Bureau's contracting officer issued a finding of fact to the Merritt-Chapman & Scott Corp., advising them as to why we had determined that this was actually subsistence rather than wages under the terms of our contract.

Now, the contractor, of course, has the opportunity of appealing that decision to the Contract Board of Appeals and should the Contract Board of Appeals uphold our views, he would then have, of course, the opportunity under the law to take it to the Court of Claims.

So it won't be, I think, ultimately disposed of until those opportunities have been exhausted.

Two of these, the Curecanti unit and the Florida participating project, are the new 1961 starts. The importance and need for these new starts will be explained in full when we reach these projects in the justifications. Three of the participating projects, the Hammond, Smith Fork, and Seedskadee are scheduled to start construction during the current year and to continue during 1961. On the Flaming Gorge unit, 1961 will see completion of all highway relocations and continuation of work on concrete placing in the dam, switchyard, and powerplant construction and permanent operating facilities. The program for Glen Canyon provides for marked construction progress on the dam and reservoir, the powerplant, and switchyard and start of the protective works for the Rainbow Bridge National Monument. Funds are provided to permit continuation of construction of the Navajo Dam at the scheduled rate and for completion of the right-of-way acquisition program and initiation of railroad and telegraph line relocations. Investigations will continue on the transmission division, including discussions with all interested parties, and advance planning will be continued on the Crystal Dam of the Curecanti unit and five participating projects. Quality of water studies will be continued. Definite plan reports on the Emery County and LaBarge participating projects are scheduled for completion in 1961.

OPERATION AND MAINTENANCE

The appropriated funds required for operating and maintaining the Bureau's irrigation, power, municipal and industrial, and other facilities for fiscal year 1961, are estimated at $31,900,000. This compares with an appropriation of $29,137,725 for the current year, including $735,000 in the Second Supplemental Appropriation Act for 1960, for emergency power purchases. Substantial increases in replacements and additions, more funds for the Columbia basin drainage work and for new facilities coming into operation in fiscal year 1961 account for this increase. The funds requested for 1961 plus some $3,800,000 to be advanced by the water users and others and $1,024,000 available from the revolving fund for the Fort Peck project are needed for the operation and maintenance of 65 projects or divisions of projects, including Missouri River Basin units, for continuation of work on the Colorado River front work and levee system, soil and moisture conservation operations, and Halogeton control on Bureau lands.

As a permanent activity, the Bureau of Reclamation operates and maintains only power projects and the power facilities and other reserved works of multipurpose projects. Completed irrigation facilities are turned over to water users organizations for operation and maintenance as rapidly as the necessary agreements can be consummated. Pending completion or until such agreements are executed, the systems are operated by the Bureau with appropriated or advanced funds. I am pleased to be able to report to this committee that during fiscal year 1959, the Bureau turned over to water users organizations facilities to serve 25,808 acres. During the fiscal year 1960 we plan to turn over 49,449 acres and the 1961 program contemplates the release of 76,492 more.

Chairman HAYDEN. When we consider the operation and maintenance request, I want it made clear that a major portion of this appropriation is returned to the Treasury in the form of payments by the water users and power revenues.

Mr. DOMINY. That is exactly right, Mr. Chairman.

As a matter of fact, as you well know, the funds are actually in the Treasury from receipts of power sales and the irrigation assessments before we spend the appropriated money. We have discussed with you previously the hope that sometime we could get this on a basis that would not require appropriations since the funds are already collected.

Under its power program, the Bureau will operate and maintain directly or by contract during fiscal year 1961 (exclusive of Fort Peck project facilities), a total nameplate capacity of 5,201,550 kilowatts in 43 powerplants, an increase of 51,000 kilowatts over 1960; and approximately 9,814 circuit miles of transmission lines, an increase of approximately 683 circuit miles.

In addition, 1,024 circuit miles of transmission lines and 30 substations with 330,550-kilovolt-ampere capacity will be operated and maintained on the Fort Peck project in fiscal year 1961. These facilities are physically interconnected with the transmission system of the Missouri River Basin project resulting in an integrated operation. I should like to explain here that in order to reflect this integration clearly in the Bureau's program, the construction, and operation, and

maintenance requirements of the facilities of the two projects have been merged under the transmission division of the Missouri River Basin project for the first time in fiscal year 1961. The construction funds required for transmission facilities, previously requested under the Fort Peck item, are included in the fiscal year 1961 allocation for the Missouri River Basin project. The operation and maintenance expenses for these facilities are also included in the Missouri River Basin program but are defrayed from the continuing fund established by the act of May 18, 1938.

Of the total appropriation requested, approximately 90 percent will be returned to the United States from power and irrigation revenues and proceeds from the sale of municipal and industrial water. The balance, which is nonreimbursable and nonrevenue producing, is made up principally of the Colorado River front and levee system, the program for soil and moisture conservation operations, and flood control work.

General Administrative Expenses

The estimate required to finance the general administrative functions of the Bureau is $4,320,000. This is slightly more than the $4,290,000 appropriated for fiscal year 1960 principally due to the employee health benefit costs commencing for the first time in 1961. These nonreimbursable funds are used to finance the general overall management-type functions and activities of the commissioner's office in Washington, and Denver, Colo., and the seven regional offices.

Loan Program

For fiscal year 1961 we are requesting $18,437,000. This amount provides funds to complete the financing of four small project loans for which 1-year needs were appropriated in fiscal year 1960. It also provides the full financing requirements for five additional small project loans for which applications have been approved by the Committees on Interior and Insular Affairs and which have completed their 60-day qualifying period before the committees of Congress. Finally, the request includes $220,075 for administration of the loan program—that is, for investigation of potential loans and for meeting administrative costs involved in negotiating contracts, answering inquiries, and generally servicing potential applicants for loans under either the distribution system or small projects loan program.

Mr. Chairman, that concludes my general statement covering the budget.

Chairman Hayden. Senator Mundt?

Senator Mundt. Thank you very much; that is a very fine statement that you have just made.

Lake Byron Development

I would like to ask two or three questions concerning projects out in South Dakota. I think you are familiar with the letter that the Secretary of the Interior wrote me on April 22, written in conjunction with some correspondence and telephone calls I had with him about Lake Byron on the Oahe irrigation project, and I would like to read just one paragraph of the Secretary's letter of the 22d and then ask you a question or two:

Recognizing the urgency for immediate action on this phase of the unit—

meaning the Oahe unit plan—

the Bureau has given consideration to means of expediting the Lake Byron development.

One possibility that appears to warrant further study is that of constructing Lake Byron to give sufficient capacity to meet the immediate needs of the area with provision for enlargement and modification in the future to conform with the overall plan for the Oahe unit.

The Bureau's program for fiscal 1961 does not include funds for studying this possibility and preparing a report thereon. A change of program of the magnitude required to provide for such a study would require affirmative action by the Appropriations Committee.

That means a change of study that would envision the change of reservoir at Lake Byron and this concept which would supply recreational water for the cities, and so forth. I was wondering if you could provide for the committee an estimate of the funds required if the committee were to recommend that you undertake that type of study.

INTRODUCTION OF STAFF MEMBERS

Mr. DOMINY. Yes, we can, Senator Mundt, and Mr. Chairman. Let me at this time introduce the members of my staff, some of whom are appearing here in their present capacities for the first time and I would like the committee to know who they are and what their responsibilities are.

I have on my left Mr. N. B. Bennett, a Wyoming man educated in Nebraska who has been in the Bureau a good long while. He is now Assistant Commissioner with major responsibilities in engineering and power phases of the program.

Next is Mr. W. I. Palmer, a Utah man, who also has been with the Bureau a good long while and he is Assistant Commissioner, responsible for planning and irrigation operations.

Next is Mr. A. R. Golzé, who has the distinction of being a Washingtonian, born and reared here in the District and has been with the Bureau a good long while and continues as the Assistant Commissioner for Administration.

Then I have some Division Chiefs who are new to the committee—Mr. Gilbert Stamm from Idaho who has had about 20 years with the Bureau and is in here now as Chief of the Irrigation Division.

Then there is Mr. Don Burnett from Texas, who is now Chief of the Division of Project Development.

Mr. D. S. Campbell who continues with us as Chief of the Division of Power and Mr. Bruce Davis who replaced Mr. Golzé as Chief of our Program Coordination and Finance Division.

OAHE PROJECT

Now, Senator Mundt, we will be glad to go into the details of this Lake Byron matter and I would like Assistant Commissioner Palmer to comment on that question.

Mr. PALMER. Thank you.

Senator, the basic problem faced with regard to accelerating the Lake Byron investigation or singling it out and making it a separate investigation evolves primarily from the fact that Lake Byron was considered along with all of the rest of the facilities of the Oahe project as an integral part of that project.

Senator MUNDT. That part of your study has not yet been completed?

Mr. PALMER. That is correct. We were out at Huron not long ago however reviewing the report and will soon make it available for a public review.

Senator MUNDT. Can you give us an estimate of about when that will be?

Mr. PALMER. It is scheduled for June 30. It looks like it will make that date.

Senator MUNDT. Very good.

Mr. PALMER. The money included in the fiscal year 1961 for processing the Oahe investigation is primarily in support of that report and assisting the local interests in its review.

Now, to single out the Lake Byron development, run a separate feasibility study for Lake Byron anticipating stage construction or something of the like, to provide immediate relief for the city of Huron and also tangible benefits in the basin would require about $95,000 and about 1 year.

Senator MUNDT. About 1 year?

Mr. PALMER. Between 9 months and 1 year.

Senator MUNDT. You could do it within the fiscal year?

Mr. PALMER. That is right.

Senator MUNDT. All right, thank you very much.

I just have one or two other questions, perhaps not questions but comments.

I will direct these to the Commissioner and you parcel them out to the appropriate place.

Mr. DOMINY. Very well, sir.

CRAZY HORSE-WAGNER UNIT

Senator MUNDT. With regard to the project down in Crazy Horse-Wagner area we have had a lot of correspondence on that. Your office has been working on that and would you tell us what you plan in 1961, in the budget for that?

Mr. DOMINY. Mr. Palmer, will you speak to that?

Mr. PALMER. Mr. Burnett, I believe you have recently run a number of checks on the Wagner development.

Mr. BURNETT. Yes, sir, the funds scheduled for 1961 in the amount of $200,000 would produce the field report on the Wagner unit with the final report to be completed early in 1962 with a minor amount of money.

Senator MUNDT. This will complete the feasibility study?

Mr. BURNETT. On the Wagner unit.

Senator MUNDT. On the Wagner unit?

Mr. BURNETT. That is right.

Senator MUNDT. Within the fiscal year?

Mr. BURNETT. The report is scheduled for completion right at the end of the fiscal year in preliminary form. We would have the final report early in 1962.

Senator MUNDT. So that assuming that it were a favorable report as to the cost-benefit ratio, construction could begin in fiscal 1962 if the project were authorized and approved and funded?

Mr. BURNETT. That would certainly require some pretty fast action, but the report could reach Congress for consideration in fiscal year 1962.

Senator MUNDT. Thank you. Does the budget provide for the funds at Angostura that were required in connection with the seepage problem that has developed there?

Mr. DOMINY. Yes, drainage installation, Senator Mundt, is contemplated for fiscal 1961 in the Moser, Gamet, and Hughes area and possibly in the Wilson area and we do have funds in the budget to take care of those additional installations that we consider necessary. We have scheduled $128,000.

Senator MUNDT. Which you people believe would do the job?

Mr. DOMINY. Yes, we consider that will be sufficient.

Senator MUNDT. One other question and I think that is all I have. That has to do with the stringing of the second Fort Thompson-Watertown 230 kv. circuit, steel towers I believe are there and funds are required, of course, to string the wires, keep it on schedule.

I just want to be sure that we are moving ahead as fast as the power needs require in that area.

Would somebody be able to comment on that?

Mr. BENNETT. We have $2,183,000 requested for fiscal 1961 to string that second circuit of the line and we believe that is adequately financed for that particular year.

Senator MUNDT. That will also include, I believe, work being started on the radio relay stations required to interconnect with the Iowa system?

Mr. BENNETT. It includes the work on the substations both at Fort Thompson and at Granite Falls, yes.

Senator MUNDT. Thank you, Mr. Chairman. I think that is all I have at this time.

Chairman HAYDEN. Senator Young?

GARRISON DIVERSION UNIT

STATEMENT OF HON. MILTON R. YOUNG, A U.S. SENATOR FROM THE STATE OF NORTH DAKOTA

PREPARED STATEMENTS

Senator YOUNG. Mr. Chairman, I have some statements that I would like to have inserted in the record in support of the proposed budget estimate of $450,000 to continue the investigation on the Garrison diversion unit. I have one statement by Governor Davis of North Dakota; Mr. Milo W. Hoisbeen, chief engineer of the North Dakota State water conservation committee; one from Bill Long, who is president of the North Dakota Irrigation District Director's Association; one by Mrs. Daphna Nygaard, a member of the Governor's coordinating committee on the Garrison diversion unit; one from the Honorable Roy A. Holand, chairman of the Garrison Diversion Conservation District; another from Mr. Vernon S. Cooper, secretary-treasurer of the Garrison Diversion Conservation District; another from Oscar N. Berg, executive secretary of the North Dakota Water Users Association; one from E. W. Rising, the Washington representative of the Garrison Diversion Conservation District; and

one by Mr. Fred J. Fredrickson, representing the Greater North Dakota Association and State water conservation committee.

Chairman HAYDEN. The request will be complied with.

(The statements referred to follow:)

STATEMENT OF FRED J. FREDRICKSON, VALLEY CITY, N. DAK., REPRESENTING THE GREATER NORTH DAKOTA ASSOCIATION AND STATE WATER CONSERVATION COMMISSION

Mr. Chairman, my name is Fred J. Fredrickson and my home is in Valley City, N. Dak., where I have lived for almost 50 years. I represent the Greater North Dakota Association, which is the North Dakota State Chamber of Commerce, and the North Dakota State Water Conservation Commission.

I am authorized and directed by those I represent to express their support of the budget estimate of $450,000 for the Garrison diversion unit, and the other budget estimates for public works activities in North Dakota for fiscal year 1961.

In brief, I wish to associate myself with the statements of Senators Milton R. Young and Norman Brunsdale, and of Gov. John E. Davis and others who have testified or filed statements endorsing and supporting the appropriation of the budget estimates for Bureau of Reclamation activities in North Dakota for the ensuing fiscal year.

I appreciate the opportunity to make this presentation.

Thank you.

STATEMENT OF E. W. RISING, WASHINGTON REPRESENTATIVE OF THE GARRISON DIVERSION CONSERVANCY DISTRICT

Mr. Chairman, I am E. W. Rising, Washington representative of the Garrison Diversion Conservancy District, North Dakota. This entity was established by the Legislature of North Dakota for the purpose of promoting and financing in part the construction, operation, and maintenance of the Garrison diversion unit.

There is need to continue investigations and planning on this unit, for which there is a recommended estimate of $450,000 in the budget for fiscal year 1961. I support this budget estimate and respectfully request its full approval by your committee so that there will be no interruption of the work now in progress.

The statements of the several witnesses who have appeared before this committee more fully set out the need and justification for the appropriation requested. I wish to associate myself with those statements and most sincerely ask your favorable consideration.

I am grateful for being permitted to make this statement in behalf of the item mentioned.

Thank you.

STATEMENT OF OSCAR N. BERG, EXECUTIVE SECRETARY, NORTH DAKOTA WATER USERS ASSOCIATION

Mr. Chairman and members of the committee, my name is Oscar N. Berg. I live in Minot, N. Dak. I represent the North Dakota Water Users Association, a voluntary, nonprofit organization formed through the amalgamation last year of the North Dakota Reclamation Association and the Missouri-Souris Projects Association. It is the only group in North Dakota, not supported by tax moneys, devoting all of its energies exclusively to the maximum conservation and utilization of our soil and water resources.

The remarkable interest and enthusiasm of North Dakota's citizens in water development is attested by the surprising growth of the association which now has a paid membership of nearly 2,400 people representing the agricultural, business, industrial, and professional segments of the State's economy.

Farmer interest is evidenced by the formation and organization of seven irrigation districts, representing in excess of 300,000 acres of irrigable land in the proposed Garrison diversion unit area. Contract negotiations with the Bureau of Reclamation are well advanced.

Statewide interest among business and professional people, as well as farmers, is manifested by the enthusiastic acceptance of an ad valorem tax presently being levied by the Garrison Diversion Conservancy District in 25 counties.

They all recognize and are willing to cooperate to the fullest extent in expanding the present tax levy when it becomes necessary to help the irrigators repay construction and operation costs of the project.

North Dakota suffered the loss of 548,000 acres of its most valuable farm and ranch lands to provide storage for the Garrison and Oahe Reservoirs. Such loss was accepted because the authorized Pick-Sloan plan of the Missouri Basin development provided for substantial irrigation in North Dakota. This will mean additional farm units, added business enterprises, new job opportunities, a substantial increase in the gross income, and a greatly increased tax base as a result of a more diversified and stable agricultural production.

I am here supporting the Bureau of the Budget estimate of $450,000 to continue the Bureau of Reclamation's investigational and planning program in North Dakota in fiscal year 1961. We, of the North Dakota Water Users Association, recognize the pressures upon the Congress in this critical time because of the stress on the national budget for security and defense needs. It is our feeling, however, that any expenditures made in behalf of the Garrison diversion unit, as well as other similar wealth-producing water resource projects, should be continued to meet the future needs of food and fiber for our exploding population. We sincerely believe that any expenditure of this kind is an investment in the future well-being of our Nation and is essential if we are to retain our leadership among the freedom-loving nations of the world.

The membership of the North Dakota Water Users Association recognizes and appreciates the consideration that you have given our program during past years. We seek your continued recognition of our agricultural and water resources development problems and needs which we feel, in a large measure, will be solved by the combined dryland and irrigated economy and other benefits that will result from the Garrison diversion unit.

Thank you very much for the opportunity to present this statement.

STATEMENT OF VERNON S. COOPER, SECRETARY-TREASURER, GARRISON DIVERSION CONSERVANCY DISTRICT

Mr. Chairman, my name is Vernon S. Cooper. I am secretary-treasurer of the Garrison Diversion Conservancy District, a position I have held since that district was organized in 1955, and assistant secretary of the North Dakota State Water Conservation Commission. During the past several years I have worked very closely with many farmers and others who are directly concerned with and will be affected by the development of the Garrison diversion unit. Throughout the entire project area there is very strong support for the early construction of the project and development of irrigation from those who will be benefiting from and paying for the project construction and operation and maintenance costs.

North Dakota has, for many years, recognized the diversion of water from the Missouri River to the eastern and central part of the State with its resulting benefits as the needed stimulant to the growth and prosperity of the State. Although benefits from the project through irrigation development, improved municipal water supplies and recreation facilities will begin to accrue soon after construction of project facilities is undertaken, the Garrison diversion unit is primarily a project for the future. This is so because of the long period of time over which it will be developed and steadily increasing demand for the production that will come from the project irrigated farms. The project will provide the basis to support an expanded population in the area. It will be a heritage for our children and grandchildren that will add to the strength of this Nation for years to come.

We are confident that the benefits that will accrue to the State and Nation from the Garrison diversion unit are much more extensive than is indicated in studies of the project if the experience on existing reclamation projects is used as a guide. We recognize the importance of all the benefits from the project. These in North Dakota receiving the so-called secondary benefits will share in the project costs through the conservancy district's tax levy. In addition, our farmers who own irrigable land that will be served under the project will repay their share of the project costs through repayment contracts they will negotiate. The willingness of the State to assume these responsibilities indicates the importance of the project to the State. Irrigation development in North Dakota and throughout the West should not be classed as a Federal expense, but as a

Federal investment in the future growth and development of our country. Facts prove that such investments will be repaid to the Federal Treasury many times over by direct reimbursement and through the creation of greater economic wealth and a broader and sounder tax base.

Proponents of the Garrison diversion unit are presently awaiting hearings in Congress on proposed legislation that will modify the project authorization. We are hopeful that these hearings will be scheduled in the near future. In the meantime Bureau of Reclamation investigations have been directed to the completion of detail surveys and planning on the irrigable land in the service areas where the greatest local support has been indicated. This detail information is essential to complete contract negotiations for the project facilities that are presently underway among the conservancy district, irrigation districts, and the Government. In order that these investigations can continue at an orderly and efficient rate to assure that the detail information will be available when needed, it is recommended that $450,000 be appropriated to the Bureau of Reclamation for fiscal year 1961.

We sincerely request your continued support of the Garrison diversion unit and your approval of the budget estimate of $450,000 to continue the investigations of the Garrison diverison unit during the coming year.

Thank you.

STATEMENT OF ROY A. HOLAND, CHAIRMAN, GARRISON DIVERSION CONSERVANCY DISTRICT

Mr. Chairman, I am Roy A. Holand of LaMoure, N. Dak. I represent my county on the board of directors of the Garrison Diversion Conservancy District and have served as chairman of that board since it was organized in 1955. Our conservancy district was established by the 1955 North Dakota Legislature to spearhead the development of the Garrison diversion unit. It is composed of the entire areas of 25 counties located in central and eastern North Dakota that contain areas that will be benefited through the development of the Garrison diversion unit. The conservancy district has specific powers and duties relating to the development of the Garrison diversion unit including the authority and the financial means to contract for the construction and operation and maintenance of the project facilities.

The diversion of water from the Missouri River to central and eastern North Dakota for irrigation and other beneficial purposes has been uppermost in the minds of many citizens of North Dakota for over 70 years. Such Missouri River diversion was authorized by Congress as a part of the Missouri River Basin project in the Flood Control Act of 1944. It was gratifying to citizens of North Dakota that Congress and the other Missouri River States recognized the importance of this diversion project in North Dakota to our State and the Nation. Bureau of Reclamation investigations and studies have established the economic soundness and feasibility of the Garrison diversion unit. We are confident that Congress will concur in these findings.

Farmers and many others in the Garrison diversion unit area are eager to proceed with the development of the project facilities without delay. We see in this development a new era of opportunity for North Dakota. Our agricultural economy will be greatly stabilized and expanded providing new farms, jobs, and homes for more people throughout the project area. We recognize that important benefits from the project will accrue to many persons and segments of our economy beyond the actual irrigation farmer. In fact, our conservancy district organization and establishment recognizes this principle for the money it raises through taxation comes from a general tax levy over the entire area of the 25 counties included in the conservancy district. The conservancy district area encompasses approximately 50 percent of the area of the State while the Garrison diversion project will directly affect only a small percentage of this area. Because the conservancy district's revenue comes from a general tax levy on both urban and rural, real and personal property, all those who will benefit from the project in the conservancy district area, even those receiving secondary benefits, will pay their share of the conservancy district's levy. This recognition by North Dakota law of the value of the so-called indirect benefits from the development of a reclamation project should be significant to Congress in determining the importance of such benefits from the Garrison diversion unit.

Our farmers who will be directly benefited through irrigation under the Garrison diversion unit have taken further steps to evidence their desire for early

development of the project. Seven irrigation districts have been organized in the Garrison diversion unit area during the past 2½ years which encompass approximately 316,000 acres of irrigable land that can be served under the project. These districts were organized voluntarily upon petition of the landowners and the establishment of the districts, was overwhelmingly approved by the landowners in every case. An example is the Lincoln Valley Irrigation District which was just organized by the North Dakota State engineer. An election on the question of whether or not the district should be established brought a vote of 206 in favor to only 26 opposed.

The board of directors of these irrigation districts have under consideration repayment contracts that have been proposed for the Garrison diversion unit. They are cooperating in the negotiation of these contracts with the conservancy district. I am happy to report to your committee that there does not appear to be any great problem or point of difference in these contracts among the contracting parties, the Garrison Diversion Conservancy District, irrigation districts, and the Government. They necessarily are involved because of the extensive nature of the Garrison diversion unit itself. However, we are confident that repayment contracts with irrigation districts and covering a sufficient number of acres will be negotiated in time to meet the present scheduled start of construction of the Garrison diversion unit. We are anxious to have the results of the detailed investigations of the Bureau of Reclamation of the irrigable lands that will be served by the project to provide a firm basis to complete these contract negotiations.

I should like to make the attached resolution adopted by the conservancy district, which supports the appropriation estimate of $450,000 to the Bureau of Reclamation for continuing the detailed investigations and advance planning of the Garrison diversion unit during fiscal year 1961, made a part of my statement.

We in North Dakota who are directly concerned with the development of the Garrison diversion unit wish to commend this committee and express our sincere appreciation for the support that has been given our project in the past. We sincerely request your continued support so that this great project can soon become a reality and begin returning the many benefits to the State and Nation.

Thank you.

RESOLUTION ADOPTED BY THE EXECUTIVE COMMITTEE OF THE GARRISON DIVERSION CONSERVANCY DISTRICT, SUPPORTING THE APPROPRIATION OF FUNDS TO THE BUREAU OF RECLAMATION FOR THE GARRISON DIVERSION UNIT INVESTIGATIONS

Whereas the Garrison diversion unit, Missouri River Basin project, when developed will (1) enhance the future economic weifare and prosperity of the people of North Dakota, particularly those within the project area; (2) provide initially for the irrigation of 250,000 acres of land periodically subjected to drought, thereby stabilizing agriculture in a large section of the State; (3) replenish and restore the depleted waters of several lakes, rivers, and streams, and increase the levels and flows therein; and (4) make available within the affected areas water diverted from the Missouri River for irrigation, domestic, municipal and industrial needs, for production of hydro power, and for recreation, fish and wildlife, and other public uses; and

Whereas investigations, engineering, and planning work under direction of the Bureau of Reclamation needs to be carried on during fiscal year 1961 in order to develop definite plan reports on the pumping plants, supply canals and layouts for the first lands that will be placed under irrigation; and

Whereas the President's budget for the next fiscal year contains an item of $450,000 for carrying forward such detail investigation work during fiscal year 1961: Now, therefore, be it

Resolved by the executive committee of the board of directors of the Garrison Diversion Conservancy District, meeting in regular meeting this 18th day of March 1960, in the city of Bismarck, N. Dak., That it wholeheartedly supports said budget estimate and urges Congress to appropriate said amount for continuing work on said project for fiscal year 1961; and be it further

Resolved, That copies of this resolution be signed by the chairman and attested by the secretary and be mailed to the Honorable Clarence Cannon, chairman, House Committee on appropriations; Hon. Carl Hayden, chairman, Senate Committee on Appropriations; Senators Milton R. Young and Norman Brunsdale; and Representative Quentin N. Burdick and Don L. Short.

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STATEMENT BY MRS. DAPHNA NYGAARD, JAMESTOWN, N. DAK., MEMBER OF THE GOVERNOR'S COORDINATING COMMITTEE ON THE GARRISON DIVERSION UNIT

Mr. Chairman and members of the committee, my name is Daphna Nygaard and my home is in Jamestown, N. Dak., in the very heart of the proposed Garrison diversion unit. I am a member of the Governor's coordinating committee on the Garrison diversion unit, and have been interested in the development of the State's water resources for the past 25 years.

Until the construction of the few water projects we have in North Dakota during the past 10 years, our people had to travel long distances to visit recreational areas. Only a few had the time and money to make such trips. Now the opportunity to enjoy the limited recreational facilities provided at these projects is available to most of our people.

But, before long, there will not be nearly enough of these areas to meet the demands and requirements, and they will soon be overtaxed. With more leisure for greatly increasing numbers seeking outdoor pleasures, the need for developing more recreational areas will soon be here. It must be met by early planning and development of justifiable water projects where recreational benefits will also accrue. North Dakota has a number of such potential areas.

Recreation, however, is but incidental to the much greater benefits which the Garrison diversion unit will provide. Congressmen Burdick and Short, Governor Davis, and other witnesses have emphasized these more important aspects. I join in their support of the budget estimate for carrying on planning activities on this unit for the next fiscal year.

One of the most popular recreation areas in the State of North Dakota is located at the Jamestown Reservoir. This project is an integral part of the Garrison diversion unit and will regulate diverted Missouri River water for beneficial use downstream. Jamestown Dam was completed in 1953 to provide much-needed flood control for Jamestown and downstream areas. It is earnestly hoped that construction on the main supply works and other features of this development can begin soon.

North Dakotans appreciate the support your committee has given this project in past years, and we sincerely trust that you will continue your support so that we may soon see construction on the initial stage of the irrigation feature.

Thank you for giving me this time to again express my support of this proposed development.

STATEMENT OF MARK ANDREWS, DIRECTOR, GARRISON DIVERSION CONSERVANCY DISTRICT

Mr. Chairman, my name is Mark Andrews of Mapleton, N. Dak. I am a Director of the Garrison Diversion Conservancy District and operate a farm in the Red River Valley near Fargo, N. Dak. We are keenly interested in the early development of the Garrison diversion unit, not only for the many benefits that will come through irrigation, but also because many cities and towns in central and eastern North Dakota now facing severe municipal water supply problems will have an assured supply of good water. If our cities are to receive this benefit from the Garrison diversion unit, it is essential that irrigation development, the major benefit from the project be developed. There is strong support for a continuation of the orderly investigation program by the Bureau of Reclamation of the Garrison diversion unit throughout the area, for which work the President has recommended $450,000 for fiscal 1961.

One of the most limiting factors in the growth and expansion of many North Dakota municipalities is the lack of a suitable water supply. Each year as the demand for water increases and these communities grow the water supply problem becomes much more critical. Over 40 cities and towns can obtain an assured water supply from the Garrison diversion unit. Some of these are our large communities that are presently facing a curtailed growth unless additional water supplies are made available.

There are many other benefits that will accrue from the development of the Garrison diversion unit. Although they are considered incidental in the project report, they will have a significant beneficial effect on the economy of the State and region. One of these is recreation. This area is limited in recreation opportunities and facilities, and providing this feature would be of tremendous value. Although it is difficult to place a dollars and cents value on this benefit one needs but to visit one of our newly created recreation areas on a summer weekend to realize the importance of such facilities to the people of the area.

The Garrison diversion unit is essential to the growth and prosperity of our State. Because we are primarily an agricultural State and because of the changing conditions affecting agriculture, we have been faced with the problem of fewer and larger farms, a population growth that is far below the national average and an outmigration of our most precious resource—our young people. Studies show that during the 1930–50 period over 240,000 of our citizens left North Dakota. About 75 percent of these people were below 40 years of age or from the age group that is needed in the dynamic economy every State or area wants and needs. The opportunity for business, agricultural and industrial growth and stability that will come with the Garrison diversion unit can change this situation.

We in North Dakota are anxious to proceed with this development as rapidly as possible and sincerely urge and request your continued support of the investigations by the Bureau of Reclamation of this project so that the essential information needed to complete project plans and contract negotiations can be obtained.

Thank you.

STATEMENT OF BILL LONG, PRESIDENT, NORTH DAKOTA IRRIGATION DISTRICT DIRECTOR'S ASSOCIATION

Mr. Chairman and members of the committee, I am Bill Long. I own and operate a farm near Upham, N. Dak., which contains 236 acres of irrigable land that will be served under the Garrison diversion unit. My irrigable land is part of the 86,000-acre Middle-Souris Irrigation District. I serve as a director on the board of directors of that district and also am the president of the North Dakota Irrigation District Directors' Association. I appear before your committee today in behalf of the seven irrigation districts that have been organized in the Garrison diversion unit to support the appropriation estimate of $450,000 to the Bureau of Reclamation to continue their detailed investigation and planning program of the irrigable lands in the Garrison diversion unit area during fiscal year 1961.

The Garrison diversion unit has always had the strong support of North Dakota farmers as well as citizens of our cities and towns. Because the economy of our State is based almost entirely on agriculture, all of our citizens realize

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that the stabilization of our agricultural economy through resources development will benefit not only the farmer but our urban population as well. They see the opportunity for a more stable agricultural economy through the development of irrigation under the Garrison diversion project.

Many of the older citizens of our State have vivid memories of the disastrous effects of drought on our economy. This memory was refreshed last year when severe drought conditions existed throughout about two-thirds of our State, including a large section of the Garrison diversion project area. Our rainfall in this large section of our State, which even at normal must be timely to provide sufficient moisture for a good crop was from 3 to 7 inches below normal. As a result, crop production in this area was severely reduced and our State farm income was reduced by approximately 20 percent.

The effects of our 1959 drought are now being felt by many of our farmers in that the scanty hay supplies that they were able to put up last summer have now been depleted and they must buy hay from out-of-State sources at very high prices. There are many farmers who are presently paying over $30 per ton for poor quality hay in order to have a feed supply to maintain their livestock herds.

North Dakota's farmers face many other problems that grow more serious each year. Most urgent is the ever recurring need to secure more farmland for each farm if the farmer's operation is to be efficient and successful. The only answer to this problem is to reduce the number of farms, thereby reducing the opportunities in our State for our sons and daughters to make their living at home. Our dry land farming economy is based primarily on the production of wheat and small grain crops. The surpluses of these crops, particularly wheat, has pointed out the need to change the pattern of our farming operations to the production of nonsurplus crops. Irrigation can greatly assist North Dakota's farmers in making this change because it will permit us to readily adapt our farming operations to a livestock economy.

The extensive and scattered areas of land that will be irrigated under the Garrison diversion unit will be integrated with adjacent dry land, thereby stabilizing the farm economy of a large area of the State. Our farmers who will be irrigating under the Garrison diversion project are anxious to proceed with its development without delay and sincerely request your continued support for this project.

In behalf of all of the irrigation districts in the Garrison diversion unit area and the farmers who own irrigable land contained in those districts, as well as the other farmers who own irrigable land that is not presently included in irrigation districts, we urge this committee's approval of the budget estimate of $450,000 for continuing the investigations and planning of the Garrison diversion unit. I should like to have included as a part of my statement, resolutions adopted by the boards of directors of the Dickey-Sargent, Warwick-McVille, Karlsruhe, Middle-Souris, and James River irrigation districts supporting an appropriation of this amount for the Garrison diversion unit investigations.

Thank you.

RESOLUTION ADOPTED BY THE BOARD OF DIRECTORS OF THE DICKEY-SARGENT IRRIGATION DISTRICT SUPPORTING THE INVESTIGATION APPROPRIATION TO THE BUREAU OF RECLAMATION FOR THE GARRISON DIVERSION ACT

Whereas the Dickey-Sargent Irrigation District, comprising 47,000 acres of irrigable land in Dickey and Sargent Counties in North Dakota that will be one of the first irrigation districts served in the Garrison diversion unit, and is directly concerned with and affected by the investigation program of the Bureau of Reclamation; and

Whereas the farmers in the Dickey-Sargent Irrigation District who own irrigable land and will be directly concerned with the development of this project as well as many other people of the area and the State who will benefit therefrom are eagerly looking forward to the early development of the project; and

Whereas the Congress of the United States has under consideration the report and recommendations on the Garrison diversion unit of the Department of Interior and comments of the Bureau of the Budget proposing that the initial project development should provide for the irrigation of 250,000 acres of land; and

Whereas the President's budget proposes the appropriation of $450,000 to the Bureau of Reclamation for continuing the investigations of the Garrison diversion unit so as to provide the detailed information needed before repayment contracts are negotiated and project construction undertaken: Now, therefore, be it

Resolved by the board of directors of the Dickey-Sargent Irrigation District in meeting duly assembled at Gogswell, N. Dak., this 11th day of March, 1960, That this board urges the Congress of the United States to appropriate $450,000 for continuing the detail investigations of the Garrison diversion unit in North Dakota by the Bureau of Reclamation so that sufficient detailed planning for this important project can be completed and available in time to permit the start of construction by the scheduled date of 1963; and be it further

Resolved, That a copy of this resolution be transmitted to the Honorable Clarence Cannon, chairman, House Committee on Appropriations; Hon. Carl Hayden, chairman, Senate Committee on Appropriations; Senators Milton R. Young and Norman Brunsdale; and Representatives Don L. Short and Quentin N. Burdick.

RESOLUTION ADOPTED BY THE BOARD OF DIRECTORS OF THE JAMES RIVER IRRIGATION DISTRICT SUPPORTING THE APPROPRIATION OF FUNDS TO THE BUREAU OF RECLAMATION FOR THE GARRISON DIVERSION UNIT INVESTIGATIONS

Whereas the James River Irrigation District, which contains approximately 13,000 acres of irrigable land along the James River that will be served by the Garrison diversion unit, is presently included in the Bureau of Reclamation's detailed investigation program to determine the exact location of the irrigable lands that will be irrigated; and

Whereas the landowners in the James River Irrigation District are anxious to proceed with the development of irrigation of their lands and recognize that before such irrigation development can take place they will have to negotiate repayment contracts for such irrigation facilities; and

Whereas it is essential that the information from the detailed surveys be available in order to provide a firm basis for negotiating said repayment contracts; and

Whereas the budget presented to Congress by the President proposes the appropriation of $450,000 to the Bureau of Reclamation to continue the detailed investigations on the Garrison diversion unit: Now, therefore, be it

Resolved by the board of directors of the James River Irrigation District in meeting duly assembled in LaMoure, N. Dak., this 11th day of March 1960, That this board urges Congress to approve the appropriation of $450,000 to the Bureau of Reclamation to continue the investigational work on the Garrison diversion unit for fiscal year 1961; and be it further

Resolved, That copies hereof be forwarded to the Honorable Clarence Cannon, chairman, House Committee on Appropriations; Honorable Carl Hayden, chairman, Senate Committee on Appropriations; Senators Milton R. Young and Norman Brunsdale; and Representatives Don L. Short and Quentin N. Burdick.

RESOLUTION ADOPTED BY THE BOARD OF DIRECTORS OF THE WARWICK-MCVILLE IRRIGATION DISTRICT SUPPORTING THE APPROPRIATION OF FUNDS TO THE BUREAU OF RECLAMATION FOR THE GARRISON DIVERSION UNIT INVESTIGATIONS

Whereas the 48,000 acres of irrigable land that are included in the Warwick-McVille Irrigation District are presently being investigated by the Bureau of Reclamation to provide detailed information on which repayment contracts can be negotiated and definite plans for construction of irrigation works completed; and

Whereas the Bureau of Reclamation's investigation program has been geared to a rate that will provide the needed information from these detailed surveys to permit the start of construction of the project facilities in 1963; and

Whereas the President's budget included an item of $450,000 to finance the investigation programs of the Bureau of Reclamation on the Garrison diversion unit during fiscal year 1961: Now, therefore, be it

Resolved by the board of directors of the Warwick-McVille Irrigation District in meeting duly assembled this 11th day of February 1960, That the Congress

of the United States is requested to approve the budget estimate of the President for $450,000 for the investigations of the Garrison diversion unit so that this essential work can continue to completion without delay; and be it further

Resolved, That a copy of this resolution be transmitted to the Honorable Clarence Cannon, chairman, House Committee on Appropriations; Honorable Carl Hayden, chairman, Senate Committee on Appropriations; Senators Milton R. Young and Norman Brunsdale; and Representatives Don L. Short and Quentin N. Burdick.

RESOLUTION ADOPTED BY THE BOARDS OF DIRECTORS OF THE KARLSRUHE AND MIDDLE-SOURIS IRRIGATION DISTRICTS SUPPORTING THE INVESTIGATION APPROPRIATION TO THE BUREAU OF RECLAMATION FOR THE GARRISON DIVERSION UNIT

Whereas the Karlsruhe and Middle-Souris Irrigation Districts together contain about 113,000 acres of irrigable land that will be served under the Garrison diversion unit which are presently being investigated in detail by the Bureau of Reclamation to provide a firm basis for contract negotiations and construction of project facilities; and

Whereas the farmers owning irrigable land in the Karlsruhe and Middle-Souris Irrigation Districts strongly support the development of irrigation and are anxiously looking forward to the start of construction of the Garrison diversion project; and

Whereas the Bureau of Reclamation's detailed investigation program for fiscal year 1961 of the lands in the Garrison diversion unit at the rate of $450,000 a year is proposed in the President's budget for the Garrison diversion unit: Now, therefore, be it

Resolved by the Boards of Directors of the Karlsruhe and Middle-Souris Irrigation Districts, duly convened in joint meeting this 22d day of March 1960, at Granville, N.Dak., That these boards urge Congress to approve the appropriation requested for the Garrison diversion unit as set forth in the President's budget so that the investigation of the project can continue at an orderly rate so that detail information can be available for contract negotiations and any delay in the project development can be avoided; and be it further

Resolved, That a copy of this resolution be transmitted to the Honorable Clarence Cannon, chairman, House Committee on Appropriations; Hon. Carl Hayden, chairman, Senate Committee on Appropriations; Senators Milton R. Young and Norman Brunsdale; and Representatives Don L. Short and Quentin N. Burdick.

STATEMENT OF MILO W. HOISVEEN, BISMARCK, N. DAK., CHIEF ENGINEER, NORTH DAKOTA STATE WATER CONSERVATION COMMISSION

Mr. Chairman and members of the committee, I am Milo W. Hoisveen, chief engineer of the North Dakota State Water Conservation Commission, a position which I have held for the past 6 years.

The Garrison Reservoir project, which has a reimbursable allocation in the amount of $63 million for irrigation purposes in connection with the Garrison diversion unit, is now complete. The dam and reservoir are the principal and most expensive features of the Garrison diversion unit. The irrigation development is essential if the intended purpose of the Garrison Reservoir project is to be fulfilled and the investment of the Government in this project for reclamation, the only reimbursable feature, recaptured.

Over 90 percent of the wealth produced in North Dakota comes from agriculture, therefore it is essential to the State that its agriculture be stabilized to the greatest extent possible. The development of 1 million acres of irrigation will help bring this needed stability. Two possibilities exist. They are—

1. The development of dams and storage reservoirs on all other streams in the State to provide regulated flow, rather than the intermittent flow characteristics these streams possess now. Tremendous Federal and State expenditures would be required as hundreds of dams would be needed to assure an adequate water supply for agriculture and other beneficial uses. The system of dams thus needed would utilize a considerable acreage in reservoir sites and dissipate a large quantity of water in evaporation. Investigation, supervision, and construction expenditures would be immense

under such a program. The operation and maintenance of the resulting facilities would likewise be a costly problem.

2. The other, the original plan, is, of course, to utilize the facilities already constructed to provide irrigation water to suitable lands in North Dakota. The feasibility of this proposal, the Garrison diversion unit, has already been established. It is well planned and studies indicate that the project will contribute sizeable benefits to the local, State, and national interests. Some of the most competent engineers in the field of hydrology have determined that the supply of water available in the Missouri is sufficient to meet the various beneficial uses considered in the Missouri River project which includes the Garrison diversion unit.

Certainly from an economic and engineering viewpoint, the development and utilization of the facilities available to us is the logical approach to the stabilization of our economy. North Dakota has geared itself to this program and is ready and willing to accept its responsibilities in accomplishing the program. Time is of the essence, for following the longest period of lush years in our State history, a significant warning of possible impending drought to come was obvious in our State during the past growing season. Over one-half of the State was subjected to severe drought. Hay crops which appeared to be in surplus a year ago have been depleted. Farmers and ranchers living in the drought-afflicted area have been forced to reduce their foundation herds by substantial numbers. Low quality hay is being shipped in from neighboring States at a cost of $32 and more per ton. This hay must be used sparingly by the ranchers if they are to maintain economical sized herds until the grassland may again be available.

The lag that has occurred in the development of reclamation in the upper Missouri Basin is of much concern to all who are interested in this segment of the Missouri Basin States. I feel that the $450,000 budget estimate for investigations on the Garrison diversion is the bare minimum needed for next year. Such an appropriation will, however, enable the Bureau of Reclamation to carry on its work on the current level and to function on an economical basis.

I thank the chairman and committee for permitting me to make this presentation.

STATEMENT OF THE HONORABLE JOHN E. DAVIS, GOVERNOR OF NORTH DAKOTA

Mr. Chairman, I am John E. Davis, Governor of the State of North Dakota. I am very happy to again have the opportunity to appear before your committee on behalf of the citizens of the State of North Dakota to support the continued orderly development of the Missouri River Basin project and more particularly the Garrison diversion unit in my State. North Dakota's citizens were greatly heartened when Congress passed the Flood Control Act in 1944 which included the authorization for the Missouri River Basin project and a Missouri River diversion in North Dakota. This project has been the major objective of proponents of the water resources development in North Dakota since the year 1889. In 1944 North Dakota's Governor, John Moses, provided vigorous leadership for the development of the water resources of the basin and the Missouri River diversion project in North Dakota. Each of our Governors since that time has provided the same strong leadership for water resources development and the diversion project. I am confident this support from North Dakota Governors will continue in the future.

The Garrison diversion unit is North Dakota's primary interest in the Missouri River Basin project. It is an economically sound project that will bring untold new wealth to the State and Nation. It was authorized as an integral part of the overall Missouri River Basin project in the Flood Control Act of 1944 and, understood as such, was approved by all basin States. This approval was the major factor which induced North Dakota to contribute so generously from its most precious asset, its land, to the development of the basin project.

A total of 548,000 acres of crop and pasture land was removed from our tax rolls for main stem reservoir purposes. This land made up over 700 farms and ranches. The loss of these farms and ranches has reduced the annual farm income in the State by almost $9 million. In addition, 1,250 citizens of towns and villages located within reservoir areas were uprooted from their homes and moved to other places. Add to this the displacement of approximately 2,500 Indians who were well established in the reservoir areas, but who had to move to less desirable locations.

The inundation of river bottom land has had an adverse effect on adjacent semiarid upland. Before Garrison and Oahe Dams existed farmers and ranchers combined the rich bottom land with the upland range and pasture and cropland to establish economical units. Now that the more productive bottom land is gone, several hundred thousand acres of semiarid upland adjacent to the reservoir has been rendered practically worthless. Added to this loss of land for main stem reservoirs should be the annual loss of approximately 500 acres of irreplaceable Missouri River bottom land between the Garrison and Oahe Reservoirs because of erosion that has increased greatly since Garrison Reservoir has been placed in operation. The Corps of Engineers has indicated that the erosion rate could easily increase to 1,000 acres annually as the releases of clear, silt-free water from Garrison Reservoir are increased.

Garrison Dam, which is now virtually complete, is providing flood control, navigation, and municipal and industrial water supply benefits to downstream areas. The only significant benefit available from Garrison to North Dakota comes from the allocation of about 40 percent of the 400,000 kilowatt generating capacity at the dam. By far the greater part of this capability is being transmitted out of the State of North Dakota. Irrigation in North Dakota, as in the other upper basin States, has lagged but now that the Missouri is controlled the opportunity to develop much desired irrigation is possible. We are confident that the Congress of the United States will continue to recognize and honor the entire authorization contained in the Flood Control Act of 1944 which includes the Garrison diversion unit.

Several important events in regard to the Garrison diversion unit have transpired since we last appeared before your committee requesting your approval of funds for investigation work for the Bureau of Reclamation. The report on an initial 250,000-acre stage has been forwarded and recommended by the Department of Interior to Congress. We are looking forward to hearings before the appropriate congressional committees on legislation to modify the authorization for the project in the near future. We are confident that the testimony which will be presented will answer any criticism of the project. The authorized Missouri River Basin project as described in Senate Document 191, provided benefits for every State involved. North Dakota was to receive extensive irrigation development, which would compensate for its loss of productive lands inundated by main stem reservoirs. We feel that the recognition given to the benefits to the area and Nation, as well as those direct benefits to the irrigation farmers, have been the object of unjust criticism by the Budget Bureau. We are confident that Congress will give proper recognition to all aspects of the Garrison diversion project and benefits that will accrue therefrom when a full discussion of the project economics is presented at the hearings on the project legislation.

The support for the Garrison diversion unit among North Dakota farmers is increasingly constantly. Our 25-county Garrison Diversion Conservancy District and the seven irrigation districts that have been established in the project area are presently negotiating repayment contracts with the Department of Interior. These negotiations are necessarily time consuming and involved in view of the size of the undertaking. It is important to these contract negotiations that the Bureau of Reclamation's investigation and advance planning program be continued at an orderly rate so that the essential detailed information will be available for the negotiations and other purposes. I sincerely urge and request your Committee to approve the budget estimate of $450,000 for continuing the Bureau of Reclamation's investigation and planning program of the Garrison diversion unit during fiscal year 1961.

The continued development of reclamation projects in the upper basin States is essential to the growth and prosperity of this region just as the continued development of the Nation's water resources is essential to the growth and prosperity of our Nation. We recognize and commend your committee for the consistent help that has been provided for the investigation and construction of many of the various features of the Missouri River Basin project. We are particularly grateful for the continued support for the investigation and planning of the Garrison diversion unit in North Dakota. It is essential that this planning continue at an orderly rate so that the required detailed information can be available to permit the start of construction of project facilities on the scheduled date.

I wish to have the attached resolution adopted by the North Dakota State Water Conservation Commission relative to the appropriation of funds for the Garrison diversion unit investigations made a part of my statement.

A further resolution of Missouri River States Committee reaffirms its support of the Missouri River Basin project is also attached, which I ask be also made a part of this statement. Such resolution, adopted January 23, 1958, by the committee composed of all the Missouri River States approves and supports the Missouri River Basin project as authorized by Congress in 1944 and as its several components have been planned and programed by the affected States and interested Federal agencies. This resolution, therefore, is an unequivocal approval and endorsement by the basin States of the Garrison diversion unit as then and now planned and programed.

I also wish to add my support to the budget request for funds for the Missouri Basin transmission division, of which $11,300,000 is for work programed in North Dakota. This activity is of the greatest importance to our State and I trust your committee will recommend approval of the budget estimate.

I wish to thank the chairman and committee members for permitting me to make this statement.

RESOLUTION ADOPTED MARCH 25, 1960, BY THE NORTH DAKOTA STATE WATER CONSERVATION COMMISSION, IN SUPPORT OF BUDGET ESTIMATE FOR THE GARRISON DIVERSION UNIT FOR FISCAL 1961

Whereas the North Dakota State Water Conservation Commission, shortly after its creation in 1937, caused studies to be made pertaining to the feasibility of a historic proposal to divert waters of the Missouri River to eastern parts of North Dakota for multiple uses, and since that time has invested over $2 million for studies and investigations on the proposed Garrison diversion projects; and

Whereas such diversion of Missouri River waters was authorized by Congress as a part of the Missouri River Basin project in the Flood Control Act of 1944; and

Whereas the Bureau of Reclamation has thoroughly investigated the Garrison diversion unit and found it to be economically sound with satisfactory benefit-to-cost ratio; and

Whereas such studies have encouraged citizens of North Dakota to contribute to the overall Missouri River Basin project in excess of any other State in the basin; and

Whereas irrigation districts have been established in central and eastern sections of North Dakota comprising 316,000 acres of irrigable lands, in reliance of approval of the Garrison diversion project, thereby displaying the deep interest in and support of the North Dakota farmers for the proposed diversion of waters of the Missouri River; Now, therefore, be it

Resolved by the State water conservation commission in a regular meeting on March 25, 1960, in the city of Bismarck, N. Dak., That it support a budget estimate of $450,000 for the Bureau of Reclamation and urges Congress to appropriate this amount for conducting necessary additional surveys and investigations on said project for the fiscal year 1961; and be it further

Resolved, That copies of this resolution be forwarded by Gov. John E. Davis, chairman, State water conservation commission, to Hon. Clarence Cannon, chairman, House Committee on Appropriations; Hon. Carl Hayden, chairman, Senate Committee on Appropriations; Senators Milton R. Young and Norman Brunsdale; Representatives Quentin N. Burdick and Don L. Short; and the Honorable Floyd Dominy, Commissioner of Bureau of Reclamation, Department of Interior.

RESOLUTION OF MISSOURI RIVER STATES COMMITTEE REAFFIRMING ITS SUPPORT OF THE MISSOURI RIVER BASIN PROJECT

Resolved by the Missouri River States Committee at a meeting in Des Moines, Iowa, on January 23, 1958, That it reaffirms its belief in and support of the Missouri River Basin project as approved and authorized by the Flood Control Act of 1944, and as planned and programed by the affected States and interested Federal agencies, and the committee does declare that the best interests of the entire basin are dependent upon and can best be served by the early and orderly development of the basin's water resources for domestic, municipal, and industrial needs, abatement of stream pollution, storage and use of water for irrigation and other agricultural purposes, navigation, generation of hydroelectric power, propagation of fish and wildlife, and the enhancement of recreational opportunities; that the committee encourages the unity and cooperative efforts of all groups and interests in the basin for the achievement of the total program.

YELLOWTAIL DAM PROJECT

STATEMENT OF HON. GALE W. McGEE, A U.S. SENATOR FROM THE STATE OF WYOMING

GENERAL STATEMENT

Chairman HAYDEN. Senator McGee?

Senator MCGEE. Mr. Chairman, I think I arranged to raise some questions by letter through the chairman because I was in Wyoming over the weekend and just now have gotten in by plane. That is the reason why I missed the first part of the program this morning.

I think I can bring an item of fairly good news to the Bureau. We had 5 inches of snow in Wyoming over the weekend and this may help problems but may create some others. We are desperately short of moisture.

Particularly, I regret missing the earlier statement on the Yellowtail Dam and particularly on the proposal by Senator Mansfield to rename the project the James E. Murray project in honor of our senior Senator and I certainly want to associate myself with that suggestion.

In Wyoming, we would be real happy with a denomination of that sort and to save time, I would like to insert in the record some comments of mine on the Yellowtail project. I assume it will become a project of a much more fitting name.

Chairman HAYDEN. That may be done.

PREPARED STATEMENT

(The statement of Senator McGee follows:)

STATEMENT OF SENATOR GALE W. MCGEE

The purpose of this statement is to support the position taken by my distinguished colleague from Montana with regard to the construction of the Yellowtail project.

This project, for which a modest sum to begin construction has been requested, is vital to the economies of both Montana and Wyoming. In a larger sense it is vital to the economy of the West and that of the Nation. If the West is to support the much larger population which is forecast by the Bureau of the Census for the coming decades and to provide the industrial and agricultural increment which is necessary to support this population at a desirable standard of living, we must begin now to provide the needed water and power.

The timely construction of the Yellowtail project will mean a very significant addition to the generating capacity of the upper Missouri Valley. One of the most striking aspects of this area is that it has an impressive industrial potential because of the large deposits of coal and other minerals which are readily availble for extraction but which are not being exploited at present. One can foresee the day when Yellowtail power will provide the peaking capacity for an industrial economy, the base powerload of which is generated by thermal units which use as fuel the previously mentioned deposits of coal.

Yellowtail can also provide the stimulus for the development of the electrometallurgical industrial complex which has been discussed and projected for years in this area. Those of us whose lives and whose fortunes are bound up in the future of these two Mountain States realize that our economy stands on the threshold of dramatic and necessary increases, that our population will rise sharply in the near future, and that the industrial, agricultural, and commercial basis for a prosperous upper Missouri Basin community rests upon the construction of such projects as Yellowtail.

It is my good fortune to serve as a member of the Senate Select Committee on National Water Resources, a committee which exists because of the vision of the

Senators from Montana in introducing Senate Resolution 48 during the 1st session of the 86th Congress. The report of this committee has not yet been completed, but studies of far-ranging scope and critical importance have already been undertaken and, in some measure, completed. One of the results of these studies is that we now know that America will need approximately 600 million gallons of water per day by the year 1980 and an even greater amount by the year 2000. It is within the capacity of our communities, private concerns, States, and Federal agencies to begin now to take action which will provide this water. It will require resolution, foresight, and sacrifice to take these actions, but they are necessary if our children are to enjoy a standard of living comparable with that which our fathers earned for us.

The Senators from Montana have shown that they have the needed courage and the construction of the Yellowtail project is one of the steps which is necessary if we are to store and use wisely enough of our water resources to meet the challenge which the Senate Select Committee on National Water Resources, under the leadership of Senator Robert S. Kerr, of Oklahoma, hopes shortly to spell out.

BUREAU OF RECLAMATION

Potential Projects in Wyoming

1. Authorized projects on which construction could be initiated if funds were made available for that purpose

Missouri River Basin project Yellowtail unit, Montana-Wyoming.—This unit will consist of a dam, reservoir, powerplant, and afterbay reregulating dam. The dam would be located on the Bighorn River in Bighorn County, Mont. It will create a reservoir of 1,375,000 acre-foot capacity, extending into Wyoming. The reservoir will regulate the runoff of the Bighorn River for irrigation of about 44,000 acres in the Hardin unit and a number of downstream pumping units. This river regulation also will make possible the full development of the upstream irrigation potential in Wyoming by utilizing storage in Yellowtail Reservoir to satisfy downstream water requirements. The 200,000 kilowatt Yellowtail powerplant will be interconnected initially with the Missouri River Basin project transmission system at Lovell, Wyo., thereby making power available in the Casper, Sheridan, and possibly the Cheyenne areas. The unit also will provide substantial benefits in Wyoming through increased recreational opportunities. The total estimated cost of the unit is $109,300,000.

2. Authorized projects on which detailed preconstruction studies are underway

La Barge project.—The potential La Barge project is located in southwestern Wyoming in the vicinity of the town of La Barge. It would provide for the irrigation of 7,970 acres of desert lands by means of a direct flow diversion from the Green River, a tributary of the Upper Colorado River. The total estimated cost of the project is $1,816,000.

Lyman project.—The potential Lyman project is contemplated as a means of improving the late-season irrigation water supply on 39,700 acres of land near the town of Lyman in Bridger Valley, a part of the Upper Colorado River Basin in southwestern Wyoming. The project works consist of a dam, canals, and drains as required. The total estimated cost of the project is $11,436,000.

3. Projects on which feasibility studies will be underway during fiscal year 1960–61

Missouri River Basin project Guernsey powerplant additions.—This potential development consists of the addition of two generating units of 5,000 kilowatts each to the existing powerplant at Guernsey Dam on the North Platte River in Platte County. The total estimated cost of the additions is $4,030,000.

Missouri River Basin project, Laramie division, Wheatland unit.—This unit consists of 52,500 acres of irrigable land in and adjoining the Wheatland Irrigation District in Platte County in southeastern Wyoming. For years the district has suffered severely from frequent and recurring water shortages which has resulted in reduced crop production and loss of income. The purpose of the investigation now underway is to develop a supplemental water supply for the unit by pumping from groundwater. These investigations are scheduled to be completed in fiscal year 1962.

Savery-Pot Hook project, Wyoming-Colorado.—The Savery-Pot Hook project is located in the Little Snake River Basin in southern Wyoming and northwestern Colorado. The project would involve construction of the 18,600 acre-feet Savery Reservoir on Savery Creek and the 65,000 acre-feet Pot Hook Reservoir on Slater Creek, along with a system of canals, laterals, and drains, to serve a total of about 35,300 acres of land of which about 16,000 would be in Wyoming. The feasibility report for authorization purposes has been prepared and is under review by the States and other Federal agencies. The total estimated cost of the project is $15,351,000.

Snake Narrows project, Idaho-Wyoming.—This project is located in Lincoln County, Wyo. It would involve the construction of a dam at the Alpine site on the Snake River to create a reservoir of 1,078,000 acre-feet capacity and an associated 270,000-kilowatt powerplant. The reservoir would provide holdover storage capacity for downstream irrigation uses, hydroelectric power production, and flood control. The feasibility report on this potential project, which is estimated to cost a total of $133,620,000 is scheduled to be completed by the end of this fiscal year.

Sublette project, Buckskin division.—The Buckskin division of the Sublette project is located on the New Fork River, a principal tributary of the Green River, in Sublette County, Wyo. The division would involve construction of storage reservoirs at one or more of the natural lakes in the Wind River range in Wyoming, along with canals and laterals, to provide a full water supply for 37,400 acres of new land and a supplemental water supply for 10,500 acres of presently irrigated land. The possibility of developing hydroelectric power as part of the division also is being studied. The feasibility report on this project which is estimated to cost a total of about $17 million is scheduled to be completed in fiscal year 1963.

Woodruff-Cokeville project, Utah-Wyoming.—This potential project is located along the Bear River on the eastern border of Utah and the western border of Wyoming. The plan that is now under investigation involves the construction of a multipurpose dam and reservoir at the Woodruff-Narrows site about 7 miles southeast of Woodruff, Utah, to provide a supplemental water supply for 43,900 acres near Woodruff, Utah, and Cokeville, Wyo. Of this acreage, 9,800 acres would be in Wyoming. This investigation is scheduled to be completed by the end of this fiscal year. The total estimated cost of the project is $1,500,000.

4. All other projects

A. *Authorized projects which detailed preconstruction studies are temporarily deferred.*

Missouri River Basin project, Bighorn Basin division, Bighorn unit.—This unit is located in the vicinity of Worland, Wyo. It will involve construction of a pumping plant on Bighorn River and a system of canals and laterals to serve approximately 1,700 acres of new land. The total estimated cost of the unit is $973,000.

Greybull Flat unit.—The Greybull Flat unit is located along the Bighorn River in Bighorn County, Wyo. It involves a pumping plant on the Bighorn River and canals and laterals to serve about 1,000 acres of new land. The total estimated cost of the unit is $506,000.

Shoshone extension unit.—This unit is located in Park and Big Horn Counties in northwestern Wyoming. Construction of the initial phase of the unit would provide a full water supply for 17,270 acres of new land south of the Shoshone River and a supplemental water supply for about 37,000 acres of presently irrigated land in the Greybull Valley. Construction of the ultimate phase would provide a full water supply for an additional 19,300 acres. Storage for the irrigation of this land would be provided in the existing Buffalo Bill Reservoir of the Shoshone project, supplemented by an offstream reservoir at the Oregon Basin site. A report on this unit was completed in 1956 and released to the State and local interests. The State of Wyoming has requested that further investigations of the unit be deferred until it has had an opportunity to resolve local problems. The total estimated cost of the entire Shoshone extension unit is $36,540,000.

Clarks Fork division, Beartooth unit.—The Beartooth unit, located in Park County in northeastern Wyoming, will involve three dams and reservoirs on the Clarks Fork River (Hunter Mountain, Thief Creek, and Bald Ridge Dams and Reservoirs), the Sunlight Dam and Reservoir on Sunlight Creek, a tributary

of the Clarks Fork River, and three powerplants with a combined generating capacity of 177,500 kilowatts. These facilities would develop the hydroelectric potential of a 25-mile stretch of the Clarks Fork River and provide significant flood control and recreational benefits. The total estimated cost of the Beartooth unit is $141,300,000.

Powder division, Buffalo unit.—The Buffalo unit, located in Johnson County, Wyo., would involve construction of the Camp Comfort Dam and Reservoir on Clear Creek. The 10,700 acre-feet of conservation capacity in Camp Comfort Reservoir would provide a full water supply to about 3,000 acres of land and a supplemental water supply for about 7,100 acres. The total estimated cost of the unit is $4,392,000.

Crazy Woman unit.—This unit, which is located in Johnson County along the North Fork of the Powder River and Crazy Woman Creek, a tributary of the Powder River, would require the construction of Prospector Dam and Reservoir on Bull Creek, Dull Knife Dam and Reservoir on the North Fork of the Powder River, and a system of canals and laterals to provide a full water supply for 5,700 acres of land and a supplemental water supply for 6,400 acres. The total estimated cost of the unit is $6,671,000.

French Creek unit.—This unit, located in Johnson County in northeastern Wyoming, would involve the construction of Horton Reservoir on French Creek with a capacity of 26,000 acre-feet. This storage capacity would provide a full water supply for 800 acres of land and a supplemental supply for 2,500 acres. The total estimated cost would be $1,920,000.

Kaycee unit.—Storage regulation for the Kaycee unit, which is located in Sheridan and Johnson Counties in northeastern Wyoming, would be provided in the 55,000 acre-foot Hole-in-the-Wall Reservoir on the Middle Fork of the Powder River. This storage capacity would provide river regulation necessary to deliver a supplemental water supply to 5,600 acres of presently irrigated land and a full supply for 23,100 acres in a number of pumping developments along the Powder River. The total estimated cost of the unit is $14,140,000.

Moorhead unit, Montana-Wyoming.—The Moorhead unit consists of a multipurpose dam and reservoir on the Powder River. Moorhead Dam, located in Powder River County, Mont., would create a reservoir of 1,150,000 acre-feet extending into Campbell and Sheridan Counties in northeastern Wyoming. This reservoir would provide river regulation necessary for the irrigation of a number of pumping units along the lower Powder River which include some 58,000 acres of land. The total estimated cost of the unit is $28,145,000. Funds were provided in fiscal year 1949 for start of construction of this unit and a preconstruction camp was established and considerable work done on a permanent camp. Because of intrastate complications and some opposition on the part of the Montana interests, however, the construction funds were rescinded by the Interior Department Appropriation Act of 1950 which also required the definite plan report in the unit be reviewed by the States of Montana and Wyoming and approved by the Congress before construction is reactivated. The camp facilities have since been disposed of and preparation of the definite plan report is predicated on agreement between the two States and active support on the part of the unit beneficiaries.

Piney unit.—The major feature of the Piney unit would be the Willow Park Dam and Reservoir located in the Bighorn Mountains about 20 miles northwest of Buffalo, Wyo. This reservoir, with a capacity of 13,200 acre-feet, would be operated in conjunction with two existing reservoirs to provide a full irrigation water supply for 4,000 acres of land and a supplemental water supply for 16,100 acres of presently irrigated land. Water would be delivered to the land by means of two diversion dams and a system of canals and laterals. The total estimated cost of the unit is $5,129,000.

Ucross unit.—Lake DeSmet Reservoir, the major feature of the Ucross unit, would be located in Sheridan and Johnson Counties about 9 miles north of the town of Buffalo. The unit would also involve enlargement of the existing diversion canal and the construction of irrigation facilities to serve 2,800 acres of new land and 7,100 acres of land in need of a supplemental supply. The total estimated cost of the unit is $2,674,000.

Tongue division, Sheridan unit.—This unit is located in Sheridan County in northeastern Wyoming. It will consist of the multipurpose South Fork Dam and Reservoir on the South Fork of the Tongue River and a powerplant of 25,000 kilowatts of installed generating capacity. The reservoir, with 51,000 acre-feet capacity, would provide a supplemental water supply for some 38,000

54770—60——19

acres of land, as well as flood control, fish and wildlife, and recreational benefits. The total estimated cost of the unit is $21,500,000.

Wind division, Crowheart unit.—This unit, which is located in Fremont County, Wyo., will provide for the irrigation of 56,000 acres of new land in three separate areas. Fremont Canal, diverting from the Wind River, would serve 26,500 acres immediately to the north of the existing Riverton project and Bull Lake Canal, also diverting from the Wind River, would serve 22,600 acres between Wind River and Little Wind River, as well as some 6,900 acres to the south of the Little Wind River near its confluence with the Popo Agie River. The total etsimated cost of this unit is $15,425,000.

Du Noir.—This unit, located in Fremont County, will consist of the Du Noir Dam and Reservoir. The reservoir, with its capacity of 220,000 acre-feet, will provide river regulation necessary for downstream irrigation purposes as well as flood control benefits. The total etsimated cost of this unit is $7,317,000.

Hudson Bench unit.—The plan of this which is located in Fremont County, involves construction of a diversion dam on the Little Popo Agie River, a feeder canal to serve an offstream reregulating reservoir, and a system of canals and laterals to serve some 5,700 acres of new land. The total estimated cost of the unit is $3,118,000.

Little Wind unit.—This unit, which is located in Fremont County, along the North Fork of the Little Wind River, will consist of Raft Lake Dam and Reservoir with a capacity of 41,000 acre-feet which will provide supplemental water for 34,000 acres of presently irrigated land. The total etsimated cost for this unit is $1,905,000.

Shoshoni unit.—The plan of development for this unit involves a pumping plant on the Wind River and a system of canals and laterals to provide a full water supply for approximately 16,000 acres of new land in the vicinity of the town of Shoshoni in Fremont County. The total estimated cost of this unit is $3,804,000.

Riverton project, third division, Muddy Ridge area.—This proposed development involves the extension of the Muddy Ridge Canal of the existing Riverton project to serve 8,864 acres of new land. The Riverton project is located in the vicinity of the town of Riverton. The total etsimated cost of the facilities to serve the 8,864 acres is $5,950,000.

B. Unauthorized projects

Fontenelle project.—The major feature of the Fontenelle project would be the Minnie Holden Dam and Reservoir on Fontenelle Creek near the town of Fontenelle. This reservoir would provide irrigation water for 5,800 acres of land lying along both sides of Fontenelle Creek. The total estimated cost of the project, based on reconnaissance data, is $2,600,000.

Missouri River Basin project, Cheyenne division, New Castle unit.—This potential development is located in Weston County on Beaver Creek, a tributary of the Cheyenne River. Based on the very limited information now available, this project would involve a storage reservoir on Beaver Creek above the mouth of Oil Creek and facilities to serve approximately 2,000 acres of land.

Clarks Fork division, Chapman unit.—This unit, which is located in the vicinity of the town of Clark, Wyo., would involve the diversion of water from the Clarks Fork River for the irrigation of about 3,600 acres of new land.

Little Snake-North Platte division.—This division involves the diversion of water from the upper tributaries of the Little Snake River in the Upper Colorado River Basin into the North Platte River Basin for irrigation purposes. The only work that has been done on this division was of a very preliminary nature and the areas to be served in the North Platte River Basin have not yet been delineated.

Transmountain diversion division.—This division involves the transmountain diversions of water from the Green River Basin in Wyoming, a subbasin of the Upper Colorado River Basin, into the North Platte River Basin for irrigation purposes. The investigations to date of this potential development have been of a very preliminary nature and the areas to be served in the North Platte River Basin have not yet been delineated.

Wind division, Tipperary unit.—This unit, located in Fremont County in northwestern Wyoming, involves the construction of a dam and reservoir on Crow Creek, a small diversion dam and a system of canals and laterals to serve 5,000 acres of new land.

Opal project.—This potential project is located along Hams Fork Creek, a tributary of Black's Fork River, between the towns of Kemmerer and Granger in

southwestern Wyoming. The project would involve the construction of a reservoir on Hams Fork Creek and a system of canals and laterals to serve 21,000 acres of new land. On the basis of a reconnaissance appraisal, the total estimated cost of the project is $12 million.

Teton Basin project, Idaho-Wyoming.—The tentative plan of development being considered for this project involves the construction of a multipurpose dam and reservoir on the Teton River in Teton County, Wyo., which with pumping from ground-water supplies, would provide a full water supply for 54,200 acres of new land and a supplemental water supply for 57,800 acres of land now being irrigated. A reconnaissance appraisal of the project is now underway and is scheduled to be completed in fiscal year 1963.

Upper Star Valley project.—This project is located in Lincoln County in west-central Wyoming. It involves the construction of Crow Creek Dam and Reservoir and a main canal to provide supplemental water for 25,080 acres of presently irrigated land.

GENERAL STATEMENT

Senator MCGEE. I would like to ask the Commissioner a few questions. The greater Wyoming area is deeply concerned and has been throughout history with the administration of our reclamation programs and maintenance of a healthy fund to keep those programs going. As the record shows, Wyoming has, over the years since it was created, contributed more to the reclamation fund than any other State. In fact, I am advised more than any other two States.

Now the reclamation funds I fully understand are not the only source of reclamation expenditures, but we in Wyoming feel it is significant to point out that reclamation construction in Wyoming caused an expenditure significantly less than the $170 million plus that we have contributed.

It isn't my desire—because we are not narrowminded out there—to advocate that each State ought necessarily to receive expenditures in proportion to what it contributes. But I may say very frankly that we are disturbed at the very sharp drop which the figures show in expenditures for reclamation construction in Wyoming in the last year.

On the basis of this concern, Floyd, I have asked the Budget, as you know, to prepare an analysis of all reclamation projects in which Wyoming has not reached the construction stage.

Now this analysis which I have here shows that one project, Yellowtail, upon which construction is ready to be initiated; two projects upon which preconstruction studies are underway—and I am wondering if you could give us an estimate on when these preconstruction studies will be completed so that you can request construction funds.

Mr. DOMINY. Assistant Commissioner Palmer will comment on that.

LA BARGE AND LYMAN PROJECTS

Mr. PALMER. May I have that listing, please, of the two projects and Mr. Burnett, you have the schedule so you please join me here.

Senator MCGEE. The two referred to are the La Barge project and the Lyman project.

Incidentally, Mr. Chairman, if it is agreeable to you I would like to include the full statement of this list that I will be referring to in the record and I will turn it over to the reporter as soon as I finish my remarks about it.

Chairman HAYDEN. Certainly.

Mr. BURNETT. The La Barge project report is scheduled for completion in fiscal 1961, at which time we would be prepared to recommend on that project.

The Lyman project report is scheduled for completion in fiscal year 1962.

Senator MCGEE. Well, that answers my questions on the first two.

Now on the same report there are six projects upon which feasibility studies will be underway during the next fiscal year and my question would be when will these studies be completed?

Now would you like me to read those?

Mr. BURNETT. Yes, sir.

Senator MCGEE. The Missouri River Basin project, the Guernsey powerplant additions.

Mr. BURNETT. The report is scheduled for completion this fiscal year. We have not received it as yet.

Senator MCGEE. But you anticipate no delay?

Mr. BURNETT. That is correct.

WHEATLAND UNIT OF MISSOURI RIVER BASIN PROJECT

Senator MCGEE. This is the Missouri River Basin project, Laramie division, Wheatland unit, a problem that we have had for some time, as you know.

Mr. BURNETT. Yes, sir.

Senator MCGEE. Not an easy one.

Mr. BURNETT. The investigation of the Wheatland unit is progressing very satisfactorily. Our report on that is scheduled for completion in fiscal year 1961.

Senator MCGEE. The next one is the Savery-Pot Hook project, a Wyoming-Colorado project.

Mr. BURNETT. We have completed our investigation and the report is now in the process of being reviewed by the States and Federal agencies for final clearance.

Senator MCGEE. And the Snake Narrows project. This was an Idaho-Wyoming combination.

Mr. PALMER. There is a problem there, Senator, of how rapidly you can complete an investigation and how soon you can get local agreement as to what is to be done. The problem would be developing local agreement and local support rather than completing the schedule.

Senator MCGEE. That is, the Bureau's investigation then is restricted, in part, by the failure of the local area to make clear a local position on it.

Mr. PALMER. That is correct.

Senator MCGEE. Individual segments are made very clear one way or the other, but there has not been a combined local position.

While I think of it, could you send me a report on the Savery? You say that is being completed.

Mr. BURNETT. We certainly can and will.

SUBLETT PROJECT

Senator MCGEE. The next one is the Sublett project in the Buckskin division.

Mr. BURNETT. Yes, sir; the status report on that project is scheduled for completion in fiscal 1960. We haven't received it yet.

Senator MCGEE. And I think we will be interested in seeing that report, if it is convenient.

Mr. BURNETT. Yes, sir.

WOODRUFF-COKEVILLE PROJECT

Senator MCGEE. And lastly in this category, the Woodruff-Cokeville project which is a Utah-Wyoming project.

Mr. BURNETT. We have received a report on the Woodruff-Cokeville project. It is being processed now for clearance for review.

Senator MCGEE. And we will be interested in that one, if it is not too much trouble.

Now in this report, you have extended to the list a lot of other projects. One of these other categories are authorized projects on which detailed, preconstruction studies are temporarily deferred and I would like to ask this general question in regard to those that have been deferred.

Are not some of the feasibility studies as the result of which these projects were deferred possibly out of date? In other words, wouldn't it be desirable in the light of more recent circumstances to have another look at some of them?

Mr. DOMINY. That is entirely possible. We encounter this frequently in project development and project planning.

The project that appears unfeasible within one economic framework of circumstances, construction costs, and so on, later as improvements occur in construction and as we get more of the multiple-purpose concept adopted and accepted in the framework of law, these projects are found feasible at a later date and I agree that there are a number in Wyoming from this list.

I was quite impressed with the number of projects that are in the category to which you refer.

Senator MCGEE. Would the Bureau have available or have any thoughts that might indicate to us which of these deferred projects might usefully be restudied?

Mr. PALMER. Certainly, sir, we do have some thoughts on those. We can review them completely again with the thought in mind of which ones should be pulled out for earlier reexamination or reevaluation in some instances.

LAND TENURE PROBLEMS

Now in one or two instances in that list we have land tenure problems; large land holdings, the owners of which are not willing to sell or come under the excess land law.

Now there are a number of those things that we simply have to assess currently almost on an annual basis and as attitudes change and conditions develop, we can pull them out and put them in an active status.

Senator MCGEE. That we always fully appreciate and try to be patient about because there are a lot of these things completely beyond the control of the Bureau because they involve people.

Mr. PALMER. That is right.

Senator McGEE. If you could give us the benefit of your thinking on what such a revised list might look like, we would appreciate it very much.

Mr. PALMER. What you would desire would be some sort of an appraisal?

Senator McGEE. A priority list on these deferred categories.

Mr. PALMER. Yes, and some sort of an appraisal as to when they would develop?

Senator McGEE. Yes.

Mr. PALMER. We can give you that.

(The information referred to follows:)

REANALYSIS OF MISSOURI RIVER BASIN UNITS IN THE STATE OF WYOMING

In the Missouri River Basin project, the Bureau has been following the practice of reviewing and bringing up to date the data on the units by means of basin type surveys of individual subbasins of the project. These basin surveys insure adherence to an overall comprehensive plan for each subbasin and firm up the plans for the various units. The basin reports are released to State and local interests to assist in formulating local opinion and serve as the basis for scheduling detailed preconstruction investigations for the authorized units and feasibility studies for the potential additions to the project.

A draft of a basin report on the Clarks Fork division was completed in 1957 but, because of conflicts with recreational interests, the report has not been approved and further action has been deferred. Basin reports are to be completed in fiscal year 1960 on the Bighorn Basin division in Wyoming and Powder division in Montana and Wyoming. In addition, detailed preconstruction studies have been substantially completed for the Shoshone extensions unit of the Bighorn division, the Moorhead unit of the Powder division, and the Muddy Ridge area of the Riverton project.

To complete this basin survey renalysis in the State of Wyoming, surveys still need to be made of the following divisions which are arranged in order of priority with the total estimated cost of the basin survey:

Division:	*Total cost of basin survey*[1]
Wind division, Wyoming	$417,000
Tongue division, Wyoming-Montana	255,000
Cheyenne division, Wyoming-South Dakota	225,000

[1] Does not include cost to date of earlier studies of the divisions or units therein upon which the present plans are based.

FUTURE PROGRAM IN WYOMING

Senator McGEE. Thank you very much, Mr. Palmer.

There are also a number of projects on the overall spectors that you graciously supplied us upon which no study is being carried on and not authorized and I am very much concerned in these in particular because they, in a real sense, represent the reclamation program of the future in Wyoming and I note on the list of the preferences which the Bureau submitted that you selected the Fontenelle project as suitable and promising.

I would like to insert in the record in addition at this time, Mr. Chairman, a list prepared for us by the Bureau of the 10 most favorable potential developments in the State of Wyoming.

This list is based, according to the Bureau, on engineering and economic feasibility.

Chairman HAYDEN. It will be included in the record at this point.

(The list referred to follows:)

BUREAU OF RECLAMATION

Listed below are what are considered to be the 10 most favorable potential developments in the State of Wyoming based on engineering and economic feasibility, extent of local interest, status of investigations, etc. As indicated in this listing, however, a number of those developments involve special problems which must be resolved prior to start of construction.

A. Authorized projects on which detailed preconstruction studies are underway:

1. La Barge project

2. Lyman project

B. Projects on which feasibility studies will be underway during fiscal year 1960–61:

3. Missouri River Basin project—Laramie division, Wheatland unit

4. Savery-Pot Hook project

5. Woodruff-Cokeville project, Utah-Wyoming

C. All other projects:

AUTHORIZED

6. Missouri River Basin project—Bighorn Basin division, Shoshone extension unit

The Shoshone extension unit was designed to utilize capacity which has been built into the existing Shoshone project works to provide full irrigation service to about 36,000 acres of arable land and supplemental water to 37,000 acres. The plan was based on an assumption that Shoshone River water users would limit their use of water voluntarily to the amount needed for efficient operation. This they are unwilling to do. Consequently, the scope of the project was limited to about half of the potential acreage which could be served without infringing upon historic use of water. Shoshone River water users oppose this plan also, fearing that it will affect the adequacy of their water supplies despite the Bureau's assurances to the contrary. The State of Wyoming has recommended that no further activities be undertaken toward the construction of the Shoshone extension unit until such time as further information in regard to several problems is available. Accordingly, further investigations and processing of the present report has been indefinitely deferred pending further advice from the State.

7. Missouri River Basin project—Powder division, Kaycee unit

A substantial part of the acres of this project is involved in holdings substantially in excess of that permitted under the 160-acre limitation of reclamation law. Before construction can be undertaken, it would be necessary to revise the plan to exclude these excess landholdings, modify the present ownership pattern to conform with reclamation law, or obtain special legislation exempting this unit from the 160-acre limitation.

8. Riverton project—Third division, Muddy Ridge area

Investigations of the Muddy Ridge area, as an extension of the Riverton project, third division, have revealed that a much smaller area than was originally contemplated is actually irrigable. Due to the fact that portions of the Cottonwood canal, the Muddy Ridge canal, and other facilities have been built to a capacity adequate to serve a large acreage, the costs of this excess capacity plus the cost of facilities yet to be built to serve the smaller area makes the per-acre cost of irrigating Muddy Ridge lands prohibitive. One solution would be to get legislative relief through the writeoff of that portion of the cost of existing facilities which has been expended to provide capacity in the works which will not now be needed. Present negotiations with third division water users are expected to set an adequate repayment pattern for use on the Muddy Ridge area. Special legislation giving the consent of Congress to the unusual repayment conditions inherent in this project will be required.

UNAUTHORIZED

9. Fontenelle project

This project is being considered for authorization as a participating project of the authorized Colorado River storage project and participating projects. Under the authorization of this project excess power revenues are to be utilized to repay costs of the participating projects allocated to irrigation which are in excess of the repayment ability of the water users. On the basis of the present construction schedule for the authorized storage units and participating projects and on the assumption that the Savery-Pot Hook project would be constructed ahead of the Fontenelle project since it was designated a "priority project" in the authorizing legislation for the Colorado River storage project, Wyoming's share of the excess power revenues may not be sufficient to permit start of construction of the Fontenelle project for several years.

10. Opal project

As in the case of the Fontenelle project, the Opal project is being considered for authorization as a participating project of the Colorado River storage project and participating projects. For the same reason start of construction may have to be delayed until Wyoming's share of the excess power revenues will be available to repay irrigation costs of the Opal project which are in excess of the irrigator's ability to repay.

AMOUNT NEEDED FOR FEASIBILITY STUDIES

Senator MCGEE. How much would be necessary, to be added to the appropriation for general investigations for fiscal year 1961, to complete feasibility studies on the unauthorized projects so that they would be ready for authorization at the end of 1961?

Mr. PALMER. On the 10 listed there?

Senator MCGEE. On the list that you submitted to me, yes. Actually, there are nine, I think on the unauthorized list.

Mr. PALMER. We will have to supply that.

Senator MCGEE. Could you supply that for us?

Mr. PALMER. Yes, sir.

Senator MCGEE. If you could also give us a list of feasibility in terms of sums, No. 1, the list; then No. 2, the cost of the whole nine. Suppose you were to select from that the best four—what would that cost be because again, I fully appreciate that you can't go whole hog on this all at once in a single year, but if we could have an estimate of the best four it would be very helpful.

Mr. DOMINY. We would be pleased to supply it for the record.

(The information referred to follows:)

COST OF FEASIBILITY STUDIES

In the following tabulation the nine unauthorized developments in the State of Wyoming have been arranged in their order of priority and, where data are available, the total estimated cost of the feasibility studies:

1. Opal project, Wyoming, $156,000

2. Fontenelle project, Wyoming, $78,000

3. Teton Basin project, Idaho-Wyoming

A reconnaissance study of this project is being initiated this fiscal year and $31,544 has been requested for fiscal year 1961 to continue the studies leading to a reconnaissance report in fiscal year 1963. Until these studies have been completed, firm data will not be available as to cost of feasibility studies.

4. Missouri River Basin project—Little Snake-North Platte division, Wyoming, $391,000

5. Missouri River Basin project—Cheyenne division, New Castle unit, Wyoming

Only a very limited amount of work has been done on this unit and data are not available on cost of a feasibility investigation. The unit will be evaluated

as part of the basin survey of the Cheyenne division currently scheduled to be initiated in fiscal year 1964.

6. Upper Star Valley project, Wyoming, $75,000

This project was investigated as part of the basin survey of the Columbia River Basin which culminated in a report entitled "Columbia River Basin—Comprehensive Plan of Water Resource Development" dated June 28, 1946. That report was submitted to Congress with the recommendation that the upper Star Valley project be authorized for construction. No action was taken by Congress and the above funds would be required to revise the data to reflect current conditions and criteria.

7. Missouri River Basin project—Clarks Fork division, Chapman unit, Wyoming

Preliminary studies were made of this unit as part of the Shoshone extensions unit but, because of water-right complications, those studies were suspended. There is an alternative possibility of serving this area by diversion from the Clarks Fork River. Very little work has been done on this alternative plan, however, and no data are available on the cost of the feasibility studies.

8. Missouri River Basin project—Wind division, Tipperary unit, Wyoming

Only a very limited amount of work has been done on this unit and data are not available as to the cost of feasibility studies. It will be appraised as part of the basin survey of the Wind division which is currently scheduled to be initiated in fiscal year 1964.

9. Missouri River Basin project—Transmountain diversion division, Wyoming, $738,000

GENERAL INVESTIGATIONS

Senator MCGEE. Lastly, I wanted to ask the Commissioner if I may return to an earlier portion of my statement, when we were talking about the five projects upon which feasibility studies will be underway during fiscal 1960 and 1961, whether the Bureau is satisfied that it has enough money in the budget allotment for general investigations?

Mr. DOMINY. Yes; I think the budget program on those five is the estimate that we made as to our requirement to carry that on in a businesslike manner during fiscal 1961.

Senator MCGEE. Mr. Chairman, that is all I have to ask and I want to thank the Bureau for cooperation in preparing our own picture that we are so deeply interested in there and supplying forthright answers to us here this morning.

Chairman HAYDEN. I know that the experience of this committee, over a period of years, has been a difficulty in arriving at conclusions.

Senator Murray, will you come around?

YELLOWTAIL DAM PROJECT

STATEMENT OF HON. JAMES E. MURRAY, A U.S. SENATOR FROM THE STATE OF MONTANA

GENERAL STATEMENT

Senator MURRAY. Thank you, Mr. Chairman.

Recent serious floods in the Mississippi Basin dramatically emphasized the value of upper basin dams, which prevented an estimated $40 to $50 million loss in the Omaha-Council Bluffs area alone. It is clear that the present measure of development on the Missouri River in the upper basin has averted tens if not hundreds of millions of dollars in flood damage.

Despite the contribution of these dams to river regulation, the damage by the recent floods was very high. Further damage will be reduced substantially by construction of Yellowtail Dam, which will control 5 percent of the flow of the Missouri as measured at St. Louis. Flood control is but one of the many benefits that will derive from Yellowtail Dam, which will provide needed power, irrigation, and recreation benefits.

Mr. Chairman, you are fully aware of and sympathetic to the need for Yellowtail Dam. I endorse the budget request for $2.5 million to start construction of the dam, and ask that the money be appropriated.

ADDITIONAL STORAGE PROJECTS

There is another aspect of upper Missouri development which pertains to the Corps of Engineers. I have detailed this request in my statement to Senator Ellender's subcommittee but it pertains in part to your subcommittee. I have asked for $40,000 which the Corps requires next year to study construction of additional storage projects in the Missouri Basin above Fort Peck for the purpose of flood control, hydroelectric power development, conservation, recreation, fish and wildlife propagation, pollution abatement, and other related uses.

This $40,000 is not in the budget; however, the Public Works Committee adopted a resolution requesting the study. By my letter of March 8 to you, a copy of which I include for ready reference, I requested that you determine from Bureau of Reclamation witnesses the amount of funds they feel is necessary to work with the corps in this study, in the interest of economy and more comprehensive planning. I hope you can provide such funds as are necessary.

Chairman HAYDEN. I am sure the Bureau will be glad to supply that information.

Mr. DOMINY. We certainly will.

(The information referred to follows:)

FUNDS FOR COOPERATION WITH CORPS OF ENGINEERS

It is not anticipated there will be any requirement for funds for the Bureau of Reclamation during the first year of the study by the Corps of Engineers of the potential reservoirs on the Missouri River above Fort Peck Reservoir, although funds may be required in subsequent years depending upon the findings by the corps during the early stages of the study.

MISSOURI RIVER BASIN PROJECT

Senator MURRAY. I have also contacted you previously in support of the request of the Beaverhead Water Users Association for $80,000 to complete the definite plan report on the West Bench unit of the Missouri River Basin project. This is certainly a worthy potential development and I hope you will take up the matter with officials of the Bureau of Reclamation and appropriate such funds as you find desirable.

Additionally, Mr. Chairman, I support the budget items to finish the Helena Valley unit and the Fort Peck-Dawson County transmission line, and to continue on the second powerplant at Fort Peck. Senator Mansfield is going into some of these matters in greater detail, and I wish to endorse and associate myself with his remarks.

Mr. Chairman, water resource development and conservation is at the very top of the list for all of us from the Western States. Certainly, this subcommittee under the distinguished chairmanship of the Senator from Arizona is well aware of how vital are adequate water supplies for the West.

CONTROL OF EVAPORATION LOSSES

One important thing that we can do about water resources is to reduce useless losses and, to this end, the reduction of reservoir evaporation losses offers promise of very significant results. For this reason, I recommend that this committee strengthen the Bureau of Reclamation program of evaporation control tests.

At your suggestion, Senator Hayden, several years ago the Committee on Interior and Insular Affairs looked into the possibilities of increasing the usefulness of existing water supplies through reducing reservoir evaporation losses. In brief, we found that these losses are really tremendous. They amount to as much water as is used by all the cities and towns in the United States, and they are greatest in the very areas where water shortages are most acute. In the Western States the average loss is over 11 million acre-feet per year, and it is equal to about one-third the amount that is consumed by irrigated crops. In many places, reservoir evaporation is the critical factor in balancing supplies and requirements.

It is encouraging, Mr. Chairman, that there seem to be practical ways to save a substantial part of these evaporation losses. Recent tests in this country and abroad have shown good results, and they show also that we should be pushing ahead with tests to work out methods for large reservoirs.

I have very encouraging reports about progress in Australia from Dr. Victor K. LaMer, professor of chemistry at Columbia University and one of the pioneer workers in evaporation. Dr. LaMer has been on scientific work in Australia recently and he tells me that new developments there show practical results on large reservoirs under conditions quite similar to those in the Southwestern States. Costs of the work, I understand, are well within economic limits.

In this country, the Bureau of Reclamation has very encouraging results of its tests on a reservoir in Oklahoma and it is proceeding with tests in Arizona for the purpose of adapting the methods to very large reservoirs. Very good work is being done but, I fear, at a much slower rate than is justified by its importance. This is because the funds available to the Bureau are far less than it could use effectively.

I took this matter up with Secretary Seaton some time ago, and I received an excellent program outline from the Department. That communication is a very clear statement of what should be done in this field, and I ask that it be printed at the end of my statement.

The 1961 program of the Bureau includes three very worthwhile items on evaporation. One of these is for field tests to improve methods for large reservoirs—and, as you know, these are scheduled for locations in Arizona and other southwestern reservoirs. These field tests, however, will provide information that will be valuable to all the Western States.

A second worthwhile activity in the Bureau program is cooperative evaporation research with the State colleges in Montana, Arizona, Colorado, and Texas. This, I am confident, will be of great value to the Bureau, the colleges, and water users everywhere.

The third important activity is laboratory work on some of the recent new ideas that can be incorporated in field work so as to increase its effectiveness and to decrease costs.

Back in 1958, the Department wrote that a sound program would justify about $500,000 per year. Unfortunately, the program for 1961 is only $100,000, and this can hardly do the job in the three items I have just mentioned. I urge, therefore, that at least $300,000 be allowed for evaporation work by the Bureau in 1961, and that in subsequent years the program should come up to a higher level in order to get early results.

Mr. Chairman, I would like to have included in this record a letter I received from the former Under Secretary of the Department of the Interior, Mr. Hatfield Chilson pertaining to this matter.

Chairman HAYDEN. That letter will be included in the record.

(The letter referred to follows:)

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., May 26, 1958.

Hon. JAMES E. MURRAY,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR SENATOR MURRAY: Your April 14 request for further information about the work of the Department of the Interior on methods to conserve water by suppressing evaporation has been carefully considered by the two Interior agencies most directly concerned with evaporation problems, the Bureau of Reclamation and the Geological Survey. Before answering your five listed questions directly, I wish to review briefly the roles of these two agencies in water conservation problems, particularly those related to the reduction of evaporation.

The Bureau of Reclamation has a well-established and vital interest in the availability and utilization of water in the Western States for irrigation and other uses. Losses of water from the Bureau's reservoirs by evaporation are of great concern because these losses result in a net decrease in water supply in a naturally water-short area and affect the quality of the remaining supply. The Bureau is, therefore, vitally interested in evaporation suppression and in exploring methods that might be used to reduce such losses.

The Geological Survey is commissioned in its organic act, to appraise the Nation's water supply. That agency, therefore, has since its inception been vitally concerned with all of the precipitation that falls on the United States including that evaporated from water surfaces and with the appraisal and measurement of the quantities of water lost.

Because of these responsibilities of the agencies, both have an interest in research on methods for reduction of evaporation losses including the application, maintenance and detection of monomolecular films and correlative effects of suppressants on the biotics of reservoirs and on public health.

As outlined in Assistant Secretary Ernst's letter of November 7, 1957, both of these agencies have active programs of investigation of evaporation suppression. These programs are complementary and are adapted to the scientific and engineering skills available in these agencies. The present work of the Interior Department in the field of evaporation suppression has been tailored to fit the available funds and has been planned to proceed along a logical sequence of steps. The work could be speeded up to some degree by the application of additional personnel and larger sums of money.

Information on the present program of work in evaporation suppression and plans for future work will be developed in more detail in the paragraphs below, which will seek to answer the five questions raised in your letter of April 14. These paragraphs are numbered to correspond with your questions. For convenience the question is repeated:

1. What is your appraisal of the scope of effort that is justified to reduce evaporation losses?

As mentioned in your letter of April 14, the annual evaporation loss in the Western States alone is very large. The annual loss from Lake Mead has ranged from 699,000 to 875,000 acre-feet, which is greater than the capacity of most reservoirs. Although the greatest benefit from evaporation suppression efforts will undoubtedly come from work on the larger reservoirs, the suppression of evaporation from small reservoirs and stock ponds should not be overlooked. Potential savings in water may not be as great as on the larger reservoirs but effective treatment of a small reservoir may be easier to achieve and therefore practical even for the individual landowner. Water saved in stock ponds would be available for longer periods than under untreated conditions, and may permit more efficient utilization of grazing lands and thus be of proportionately greater economic benefit than the amount of water saved. It should also be recognized that potential benefits to be derived from evaporation reductions are not confined to the Western States. All power and water supply reservoirs are subject to evaporation losses that represent economic loss. Although the greatest economic potential benefits are presently in the Western States, other parts of the Nation will ultimately be benefited if evaporation suppression is practical.

The scope of the effort that is justified to reduce evaporation losses is undoubtedly far greater than that which is now being expended. A reduction of 25 percent in the evaporation loss from Lake Mead alone would be worth much more than is now being expended for evaporation suppression research. The ultimate effort that will be justified will depend entirely on the success of present and future investigations in demonstrating the economic benefits to be derived.

The amount of money that would be required depends in part on the results of the work now being pursued on Lake Hefner. It is estimated that as much as $500,000 might be required for the Department of Interior's program within the next year, and in successive years. This annual figure may have to be tripled, if early results are successful. You will understand, I am sure, that the fund requirements to pursue a program of investigations would be subject to the normal budgetary procedures and policies prevailing at the time that a request for appropriations might be considered and also to the subsequent action of the Congress thereupon.

2. What long-range program do you recommend to accomplish this objective?

A long-range program for evaporation suppression should include three principal kinds of activities which, in the approximate sequence of accomplishment are (*a*) the research necessary to delineate the methods of evaporation suppression which have the greatest potential and the methods necessary to determine accurately the volumes of water saved by the methods being tested; (*b*) extensive field investigations and trials on reservoirs of various sizes and in a number of geographic locations to develop adequate field techniques and operational procedures and to appraise the economic feasibility of evaporation suppression; (*c*) a sustained program of application to reservoirs for which economic justification can be demonstrated; and (*d*) a limited program of continuing research in the development of more efficient evaporation retardants and in advanced techniques of accomplishing evaporation reduction.

Important aspects of the required research are as follows:

i. The selection of the most efficient acceptable chemical, or chemicals, for use under various conditions;

ii. Investigation of methods to apply and maintain an efficient monomolecular film;

iii. Investigation of methods to monitor the presence of a film on both small and large water bodies;

iv. Refinement of methods to evaluate water savings in a film-covered reservoir. This includes study of the effects of the film on emissivity, reflectivity, and energy convection characteristics of a water surface;

v. Fundamental study of the minutise of the evaporatism process. These studies could lead to the development of methods for evaporation reduction not now known;

vi. The effects of a monomolecular film on the chemistry and physics of a water body, including effects on temperature, oxygen, miscroscopic life, and characteristics pertinent to public health.

A considerable amount of research has been accomplished during the past 2 or 3 years but much remains to be done. Research to date has been concerned

principally with the selection of suitable chemicals for a monomolecular film, methods for applying, maintaining, and detecting a film, techniques for evaluation of the water savings accomplished, and on certain chemical and biological effects of a film. The results of this research, conducted both in the United States and abroad, have been sufficiently favorable to indicate the justification for further research. However, because some tests have shown a disappointingly low efficiency in decreasing evaporation, a painstaking research approach is the wise course of action for the immediate future.

Field investigations, most of which can be conducted concurrently with the basic research, are as follows:

(*a*) Measurement of the rates of evaporation from an assortment of water bodies. Accurate information is not now available as to the magnitude of evaporation losses from western reservoirs, except on an annual basis. Better techniques based upon research at Lake Hefner, and at Lake Mead, are available but as yet have been used at only a few reservoirs. Any rational decision as to the desirability of reducing evaporation losses should base upon a knowledge of the magnitude of those losses.

(*b*) Trial applications of monomolecular film methods to reservoirs of various sizes are a necessary part of the field investigations to explore the engineering and scientific problems to be encountered in field applications and to test the effectiveness of proposed suppression methods under field conditions. Work of this nature will be initiated this summer on Lake Hefner. The details of future plans for tests on larger reservoirs will be contingent upon the results of the Lake Hefner tests.

Among the large reservoirs which are being considered for testing if forthcoming results are favorable are:

Reservoir	Location	Project
Belle Fourche	South Dakota	Belle Fourche.
Box Butte	Nebraska	Mirage Flats.
Cachuma	California	Cachuma.
Elephant Butte	New Mexico	Rio Grande.
Glendo	Wyoming	Missouri River Basin.
Lake Lowell	Idaho	Boise.
Lake Mead	Arizona-Nevada	Boulder Canyon.
Roosevelt	Arizona	Salt River.
Willow Creek	Montana	Sun River.

Field tests on two reservoirs 3 to 5 acres in size have already been completed and tests on two other small ponds are now in progress. Plans have been formulated to test proposed evaporation reduction methods on one or more reservoirs of intermediate size, 100 to 200 acres. Plans have been proposed, also, to do a mass statistical study on a large number of small stock ponds of various sizes, possibly in the Twenty-mile Creek Basin in Wyoming.

The increased application of personnel and money to the proposed field tests could help to expedite the development of economical methods of evaporation suppression but, as may be readily recognized, field testing must of necessity be based upon the results of the basic research and must proceed from one kind of testing to another contingent upon the results of each succeeding stage in the testing process. It is, of course, impossible to foresee the results of research or field testing. In any research program, problems are likely to arise that require an extended and unknown period of time for solution. However, it is probable that a period of from 3 to 5 years will be required to accomplish the initial research and field testing preparatory to the beginning of operational applications.

3. What activities should be carried forward immediately in order to make maximum progress in attaining practical results?

A limited amount of work has been accomplished and is in progress for the establishment of the continuing field program for evaporation reduction. It is not necessary that any basic changes in the nature of this program be made immediately in order to make maximum progress in attaining practical results. As previously pointed out, the process of attaining practical methods may be expedited by the application of additional personnel and funds. As a matter of policy it would seem desirable that the major immediate effort be placed upon the research aspects of the problem. Field testing of an appropriate nature may be carried out concurrently with the research activities. Although research on a scientific and engineering problem is expensive, it is probable that the field

testing in this problem will be the more expensive part of the development process.

4. In what way should this problem provide for inclusion of State colleges and experiment stations, water officials, private research institutions, water-user organizations, and industrial interests?

Certain segments of the research phases of the problem may properly be accomplished by State colleges and experiment stations or by private laboratories. For example, the development of practical field methods for measuring film strength and for film identification could be accomplished in either public or private laboratories. Such facilities will be utilized whenever it becomes advantageous to do so. This has been carried out in the past. For example, the Bureau of Reclamation now has a contract with the Colorado State University to evaluate the effects of a hexadecanol treatment upon the aquatic biology with particular emphasis on game fish. The necessity of close coordination of laboratory and field tests may require that most of the research be done in the agencies of this Department.

5. Does your Department now have statutory authority adequate for the program that you consider desirable?

This Department in general now has adequate statutory authority to conduct a program as outlined above. However, the cost of the work of the Bureau of Reclamation would have to be charged out to projects and be classed as reimbursable unless a provision was included in the appropriation act to authorize the expenditures to be nonreimbursable.

In view of the importance to this Department of conserving resources, we are most pleased to know of the interest your committee has shown in this activity and we desire to cooperate with you fully in attaining the hoped-for results of reducing water losses through evaporation.

Sincerely yours,

HATFIELD CHILSON,
Acting Secretary of the Interior.

POSSIBLE BREAKTHROUGH ON EVAPORATION CONTROL

Senator MURRAY. Thank you, Mr. Chairman.

Chairman HAYDEN. Thank you, Senator.

Mr. DOMINY. I would like to comment just a moment, Senator Murray and Mr. Chairman.

As we have reported to you, sir, we think that some real progress is being made and, potentially, a breakthrough on this evaporation control is possible.

We certainly would not disagree with your observation that an increased emphasis with additional appropriations could be wisely spent on this.

A research program of this character, however, cannot be financed like a Yo-Yo. If we get additional funds, it ought to be over a period of years so that if we are going to step up the pace it ought to be continued over a several year period at that increased level in order to fully utilize and make productive the work made possible by the increased appropriations.

Senator MURRAY. I see the wisdom of these remarks and I am sure that is true.

Chairman HAYDEN. Senator, there is a live quorum requested in the Senate at this time and that requires our presence.

COMMITTEE RECESS

The committee will stand in recess until 10 a.m., Wednesday.

(Whereupon, at 11:15 a.m., Monday, May 2, 1960, the subcommittee recessed, to reconvene at 10 a.m., Wednesday, May 4, 1960.)

PUBLIC WORKS APPROPRIATIONS FOR 1961

WEDNESDAY, MAY 4, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223, New Senate Office Building, Hon. Carl Hayden (chairman) presiding.

Present: Chairman Hayden and Senator Dworshak.

Also present: Senators Engle and Moss.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENT OF HON. CLAIR ENGLE, A U.S. SENATOR FROM THE STATE OF CALIFORNIA

General Statement

Chairman HAYDEN. The committee will be in order.

We will be glad to hear from you, Senator Engle.

Senator ENGLE. Thank you, Mr. Chairman.

It is a great pleasure to appear before you on a matter which is of great interest to me, and has been for many, many years.

The subject before you today has been close to my heart as long as I have been in public life. This is the 17th year that I have appeared before an appropriations committee of the Congress to support the reclamation program and, upon occasion, to advocate a bigger and better program. I thank you for giving me this further opportunity today.

My statement is confined to three items in the budget you are considering: The Sacramento Valley canals; the Trinity River division, including the Cow Creek unit; and the reclamation loan program.

Mr. Chairman, I will be relatively brief.

Sacramento Valley Canals

Senator ENGLE. First, with respect to the Sacramento Valley canals which were authorized in 1950, I wish to endorse the request that was presented to you on April 6 by the California Water Commission. As pointed out by the commission's able chairman, Mr. James K. Carr, in view of recent progress on repayment contracts, the $10,000 study item in the President's budget is not enough. It should be increased to $300,000 for advance engineering and design of the irrigation facilities that are now urgently needed to carry Central Valley project water to the west side of the Sacramento Valley. At least seven

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irrigation districts have executed contracts covering about 82,000 acres of the 150,000 or so irrigable acres under the Tehaema-Colusa Canal.

Furthermore, the California Legislature has agreed to underwrite the repayment of this canal.

Chairman HAYDEN. That is an unusual procedure, is it not?

Senator ENGLE. That is correct.

DESCRIPTION OF CANALS

Let me say this, Mr. Chairman, that we authorized these canals in 1950. There were two canals, the short canal that runs roughly from Red Bluff to Corning and a little below, and then the long canal that goes by Willows and on down the west side of the Sacramento Valley.

Our purpose in authorizing these canals was to give the Sacramento Valley somewhat the same treatment under the Central Valley project that had been received by the San Joaquin Valley, where we have canals on both sides of the valley.

The Bureau of Reclamation, for some reason or other, got chinchy about these repayment contracts. They want them all wrapped up with gold seals and blue ribbons, although they hadn't theretofore, as far as I know, ever insisted upon that kind of an arrangement.

Well, these districts are glad to contract for the water, but 50 years is a long time, and they are a little slow coming in. Although, as I point out here, they have 82,000 of the 150,000 acres under contract, the Bureau was still reluctant to ask for money for construction.

CALIFORNIA WATER CODE

So the State of California stepped in and said, "We will underwrite the repayment of these contracts," and they passed an act, which is section 12898 of the water code, relating to the Sacramento canals unit of the Central Valley project.

It reads as follows:

The people of the State of California do enact as follows:

SECTION 1. Section 12898 is added to the water code, to read:

12898. The Sacramento canals unit of the Central Valley project is approved for State participation to the extent that funds are hereafter appropriated therefor.

The department may enter into a contract with the Federal Government on behalf of the State under which the State agrees to pay to the Federal Government, each year that the net revenue derived from the operation of the Sacramento canals unit is less than the amount necessary to pay the appropriate share of the reimbursable construction cost of the unit allocated for repayment in that year, an amount equal to the difference between the revenues received and the amount so allocated for repayment. The contract shall condition any payment upon an appropriation being made therefor.

STATE FUNDS AVAILABLE

The legislature also last month appropriated $150,000 to meet any 1960 commitment pursuant to the above act. I submit, Mr. Chairman, that the State and local districts have shown good faith. The $300,000 Federal appropriation which I request for the Sacramento Valley canals is fully warranted.

This would make it possible for them to go ahead and do their engineering design.

Now, the State is willing to execute the back-up contract. And I call attention to the fact that on the Black Butte and the New Hogan Dams, the State of California stepped in and underwrote the repayment of the reimbursable cost to the tune of some $13 million.

Now, that was for the irrigation features of these two projects, which are flood control projects, but which have irrigation benefits.

And after the State was perfectly willing to enter into a contract backing up the repayment of those reimbursable costs, the Interior Department insisted that the State put up the money, and they put up $13.7 million to guarantee the repayment for Black Butte and New Hogan Dams.

Chairman HAYDEN. You mean the State loses interest on that amount of money?

Senator ENGLE. That is correct. That $13.7 million sits there, and it will be reduced from time to time as these various districts enter into repayment contracts.

But the thing that aggravated me about it was that the Interior Department and the Federal Government evidently were not willing to take the pledge on the contract from the State of California.

Now, it is my view that, as an accommodation between governments, the Federal Government should say that when the State commits itself the State is going to meet its obligation; and secondly, in my opinion, after a State has entered into a contract with the Federal Government in which the State agrees to do these things, that, if the State fails to do it after the Federal Government has executed its part of the contract, no court in the country would permit the State of California to default on its obligation.

But that is past. We are not worrying about that. The State put up its $13.7 million, and that contract has been put together and executed. The State laid $13.7 million on the barrelhead, and they have it.

Now, we are here with these Sacramento Valley canals that were authorized in 1950. The State is again willing to step in right behind those irrigation districts and say to the Bureau of Reclamation, "All your timidity about this is bunk. We have faith in the irrigation developments of that area; we are perfectly willing to back these contracts, and we will execute a contract to do so."

FUND REQUEST FOR ENGINEERING DESIGN

And I am asking now, instead of $10,000, which is a very small amount, that $300,000 be put in there to do the engineering design on these canals and get this long canal underway.

It seems to me it is a reasonable request. The canal is going to be built eventually, and I hope that we can get started now. Here we are, 10 years after we authorized these canals, which were authorized in 1950.

COW CREEK UNIT

Senator ENGLE. The second item I wish to advocate in particular is the heretofore neglected Cow Creek irrigation unit of the Trinity River Division of the Central Valley project. It was authorized in 1955. But there still is nothing for Cow Creek in the budget. The Shasta County Water Agency wired me last week on behalf of the Bella Vista Water District that it is ready to execute a water service

contract. The California Water Commission has requested an appropriation of $555,000 to complete designs and start construction. This is also my request.

May I say, Mr. Chairman, that we are building the Trinity project; it is presently under construction, and I intend to refer to it a little later in this statement. But incident to that, this Cow Creek unit is a little irrigation project up next to Redding.

The water impounded at Shasta and Trinity is largely for the benefit of other parts of the State. And I have always felt that these areas of origin of this water have a right to get just a little participation on the same basis that other areas in the State do. I couldn't see any reason for building a great project like Shasta or like Trinity and exporting their water to other parts of the State, leaving nothing whatever for the local people.

INCLUSION OF LOCAL PROJECTS

And so whenever I authorized a project in California, as I did on numerous occasions when I was in the House of Representatives, where it was feasible I tied in a small local project so that they would have some benefits too from these great projects.

I did it on the Folsom project and I did it on others, and it became standard practice.

The Cow Creek unit is one of these, and it ought to be put underway, because it is part and parcel of the Trinity project. As I say, it is proper so that these people in the area where the water originates will get water after the construction boom is over.

The $550,000 is to complete designs and start construction of the Cow Creek unit. It is the amount recommended by the official State agency on water projects in their appearances before the respective congressional committees.

TRINITY POWER FEATURES

With respect to the Trinity River Division generally, I have some question as to the adequacy of the administration budget. However, I will restrain a request at this time for an increase in the 1961 appropriation, for reasons which I would like to explain.

The reason for my question is that the Trinity power items in the budget are, on the average, only about two-thirds of what Secretary of the Interior Seaton said a year ago he would have to have in fiscal 1961 to complete the powerplants on schedule. Let me list for the record, Mr. Chairman, the respective estimates in the construction schedule which Mr. Seaton provided me in March 1959, and in the administration budget transmitted to the Congress in January 1960: And I will ask permission to put those in the record.

Chairman HAYDEN. It may be done.

(The information referred to follows:)

Trinity power features	Fiscal year 1961 estimates	
	Secretary Seaton in March 1959	Administration budget in January 1960
Trinity powerplant	$5,770,000	$4,807,500
Clear Creek powerplant	6,360,000	4,790,000
Spring Creek powerplant	5,100,000	4,020,000
Transmission division	4,555,060	1,279,000
Total	21,785,000	14,896,500

SPEED OF CONSTRUCTION PROGRAM

Senator ENGLE. The totals are $21,785,000 which was Secretary Seaton's estimate in 1959, and $14,896,500 in the budget of 1960—in other words, a difference of $7 million. And I have in mind, of course, that these programs, once underway, have to proceed at a certain level of speed, otherwise it is inefficient construction. After you get hold of it, the only thing to do is to go forward and finish it, because any delay is detrimental and inefficient in the construction program.

Chairman HAYDEN. You can't get the contractors to work on any other basis.

Senator ENGLE. That is correct.

The deficiencies in the budget figures, I think you will agree, are substantial. Nevertheless, the reason for my restraint is that I am assured by the Bureau of Reclamation that the budget items are adequate to provide for the awarding of contracts on powerplants and transmission facilities in order to complete construction and get into production in July 1963. I hope they are right—although, parenthetically, I note they are presently behind schedule on some critical items.

So my restraint, Mr. Chairman, is temporary. It applies only to the fiscal 1961 budget. As was demonstrated last year by private engineering studies submitted to this committee, each year's delay in the completion of the Trinity power facilities will cost the U.S. Government about $51½ million in gross revenues.

In other words, if we dillydally around here and don't build these powerhouses, it costs $51½ million every year that we don't get them finished.

Accordingly, I hereby serve notice that I expect the Department, in the budget it soon will be preparing for a new administration for fiscal 1962, to include adequate funds for the Trinity power items in order to get back on the schedule that Mr. Seaton gave me a year ago. The target date for completion is July 1963. I feel strongly that it must be met.

RECLAMATION LOANS

Senator ENGLE. And the third and last item, Mr. Chairman, which I suggest be augmented is the fiscal 1961 loan program under the Small Projects Act (Public Law 984) of which I was the author in the 84th Congress. In addition to the budget proposal for reclamation loans, all of which I support, I ask that you give favorable consideration to two more small projects which now have been approved by the Department of the Interior and transmitted to the Congress, but too late for inclusion in the budget.

They keep working these projects through, as you know, Mr. Chairman, and sometimes they lap over, that is, they are a few weeks behind, and they don't get in.

Chairman HAYDEN. But the requirements of law have been complied with here?

Senator ENGLE. That is correct.

They are the Virginia Ranch project of the Browns Valley Irrigation District which requires a loan of $4,804,000, and the Camp Far West project of the South Sutter Water District which requires a loan of $4,875,000. The 60-day waiting period for Browns Valley will end in mid-May, and that for South Sutter in early June. Accordingly, the appropriations should be provided at this session of the Congress.

Of course, it will save them a year if they get ahead now.

These are good projects and meet all of the qualifications of the Reclamation Small Projects Act, which is one of the best acts we have passed in this Congress in a great many years.

WHEELING AMENDMENT

Senator ENGLE. Finally, Mr. Chairman, I have a proposal which is not a request for funds, but rather a request for an amendment or elimination of a restriction that was imposed last year, and by implication at least still inhibits the Bureau of Reclamation in future utilization of transmission line appropriations. I refer to the proviso in the fiscal 1960 Public Works Appropriation Act (73 Stat. 491, 495) which states in part that—

no part of this appropriation shall be used to initiate the construction of transmission facilities within those areas covered by power wheeling service contracts which include provision for service to Federal establishments and preferred customers * * *

The incongruous thing about this proviso is that it prevents the Government from saving money in certain cases in which it is actually cheaper for the Government (to say nothing of the power consumers) to provide direct service to public agencies than it is to pay the cost of wheeling. A notable example in my State is the Shasta Dam Area Public Utility District, the circumstances of which I believe you are familiar with. Located only 3 miles from Shasta Dam, the district now gets its power from the Pacific Gas & Electric Co., nominally by means of wheeling Shasta power 200 miles down the valley and back up again. At a hearing of the House Subcommittee on Assigned Power and Land Problems at Sacramento in March, it was demonstrated that the Government alone, by direct service to the Shasta Dam

PUD, would save $26,000 annually under the cost of wheeling. I ask that this anomaly be corrected.

The situation is this, Mr. Chairman. This little utility district sits practically in the shadow of Shasta Dam. There is a wheeling agreement with PGE. And that has been in existence for some years. But that power comes down the valley and then has to be wheeled back to them. And all we are saying is that, when we are so close to the powerhouses, why not just hook this district on and not have them pay this wheeling charge? Both the Government and the district would save money.

If the committee didn't see fit to eliminate in total this language which was in the Pubic Works Appropriation Act of 1960 that I have referred to, then it would seem to me appropriate to make a specific exception in this instance because of the approximation of this utility district to the source of Government power itself.

And that is all I have, Mr. Chairman.

Thank you very much for taking the time to hear me.

Chairman HAYDEN. Thank you.

Senator Moss.

RAINBOW BRIDGE NATIONAL MONUMENT

STATEMENT OF HON. FRANK E. MOSS, A U.S. SENATOR FROM THE STATE OF UTAH

OPPOSITION TO CONSTRUCTION OF "PROTECTIVE WORKS"

Senator Moss. Mr. Chairman, I am Senator Moss, of Utah. Most of the people, I am sure, who appear before this subcommittee come here to ask for money. I am here to try to turn some down. I am here to oppose the appropriation of any money in the fiscal year 1961 for the construction of "protective works" at the Rainbow Bridge National Monument in my State of Utah.

The Department of the Interior, under a responsibility thrust upon it by the Upper Colorado River Storage Act of April 11, 1956, has asked for $3.5 million for fiscal 1961 to begin the construction of two small dams to "protect"—and I use the word "protect" in quotes—the great Rainbow Natural Bridge from the encroaching waters of the lake formed by the Glen Canyon storage dam on the Colorado River. Before they are completed, the two little "protective" dams will cost in the neighborhood of $25 million.

Mr. Chairman, I am convinced that to appropriate these funds would be to waste them. The waters of Lake Powell which would be backed up under Rainbow Bridge will never be high enough to reach the abutments of the bridge, or to do any sort of damage to it. On the other hand, a sliver of water flowing under the bridge would enhance both it and the dry, rugged country in which it is located, and make them both much more accessible than they now are.

The provisions directing the Department of the Interior to plan and build the so-called protective works were written into the Upper Colorado authorizing act when the Echo Park Dam fight was at its height. The bill was specifically amended by the House Interior and Insular Affairs Committee to provide that no dam or reservoir constructed under the authorizing act should be within any national

park or monument, and also to instruct the Secretary of the Interior to take adequate protective measures to preclude "impairment" of the Rainbow Bridge National Monument from the waters of the Glen Canyon Reservoir.

I am sure that both the House and the Senate accepted these provisions in good faith, believing they were necessary to preserve a great natural phenomenon.

Chairman HAYDEN. I think you are correct about that.

RESULTS OF STUDY

Senator Moss. Now, however, there has been time and opportunity to study the Rainbow Bridge proposals and the country in which the bridge is located. The results of these studies leave no doubt that the bridge does not need protecting from Glen Canyon waters. It is now abundantly clear that the Interior Department is being forced to build elaborate and costly works which are not necessary—which cannot be justified by any conservation criteria. In fact, to allow their construction would probably wreak more havoc than to prevent them; would do more to spoil the untamed beauty of the area than a finger of fresh water possibly could.

I feel therefore that the Department of the Interior should be relieved of its responsibility to build the protective works, and that the taxpayers should be saved $25 million.

BACKGROUND ON PROJECT

To make my case, I need first to give you a little background on Rainbow Bridge National Monument. Created by Presidential proclamation May 30, 1910, it comprises an area of 160 acres in San Juan County in southeastern Utah. It is about 5 miles north of the Arizona border and about 30 air miles northeast of the Glen Canyon damsite, in a striking and brilliantly colored area.

Rainbow Natural Bridge is the largest known natural bridge in the world, with an arch extending 309 feet above the canyon floor—high enough to curve over the Statue of Liberty. The arch was formed by the waters of Bridge Creek cutting through a narrow neck of Navajo sandstone to shorten their course to neighboring Aztec Creek and on into the Colorado River. The inner gorge of the channel below the bridge, in which Bridge Creek flows intermittently, is about 110 feet wide and 65 feet deep.

INACCESSIBILITY OF RAINBOW BRIDGE

Rainbow Bridge can presently be reached only by mule pack over a 15-mile trail from the Navajo Mountain School near the Utah-Arizona border, or by a 6-mile hike from the Colorado River. Thus it is seen each year by only a few people—and hardy ones at that.

I think we all agree that such a magnificent natural phenomenon should be protected from "impairment" by any manmade project, and if I felt there was the slightest danger that the waters of Lake Powell formed by Glen Canyon would impair the Rainbow Bridge, I would be the first to demand protection. But I am convinced there is no danger.

I have in my hand the preliminary report of the Bureau of Reclamation, region 4, Salt Lake City, on the protective works recommended

for the Rainbow Bridge National Monument, Glen Canyon unit, Colorado River storage project. Because of the provisions written into law in 1956, the Bureau of Reclamation, the National Park Service, and the Geological Survey have all sent field parties into the remote Rainbow Bridge country to assist the Bureau to make recommendations on potential protective measures for the bridge. These men carried out their assignments, and then wrote as objectively as they could on the problem.

WATER LEVEL AT BRIDGE SITE

Let me tell you in their own words what was found (I'm quoting now directly from the Bureau of Reclamation report):

> The Glen Canyon Reservoir behind the dam at a flow line water surface elevation of 3,700 feet would, if unrestrained, back water up in the channel of Bridge Creek under the bridge and to a point about 100 feet beyond the upstream boundary at the monument. At this elevation the water would be 94 feet deep at the downstream boundary and 15 feet deep at the upstream boundary. Under the bridge the water would be 46 feet deep but the water surface would be 21 feet below the left abutment and 33 feet below the right abutment of the bridge.

Let me repeat—the water would be 21 feet below the left abutment and 33 feet below the right abutment of the bridge. In other words, when the reservoir was at its highest level—which incidentally would only be 13 percent of the time—the water would be far below the columns of the arch, and could not possibly lap against them or impair them in any way.

The Bureau's experts further estimated that an unrestrained reservoir would back up across the monument boundary about 95 percent of the time, and up under the bridge itself about 77 percent of the time.

To quote again directly from the Bureau's report:

> Examinations made of the creek channel beneath the bridge indicate that the presence of reservoir water in the channel would not weaken the abutments or foundation of the bridge. Erosion presently caused by wind and changing temperatures would cease in the stillwater region of the reservoir. Waves would be restricted by the narrow, crooked canyon so that erosive wave action would be of minor consequence. Moreover, the lower left abutment of the bridge nearest to the inner channel is separated from the channel by 40 feet of sandstone.

ELIMINATION OF EROSION

The report goes on to state that because the creek runs through a formation that is medium soft to medium hard thinly cross-bedded sandstone, the banks are subject to erosion by flash floods, and that the presence of the reservoir water in the channel would greatly retard the erosion processes. Also that since seepage is common the presence of the reservoir would cause no material change in the groundwater condition and no uplift pressure would be exerted on the foundation of the bridge.

It seems to me this proves conclusively that Rainbow Bridge would not be endangered by the reservoir waters. And it takes very little imagination to see that the monument would be enhanced. The area is one of the most spectacular and breathtaking in the West—a sliver of water backing up into it would add greatly to its scenic lure. It would also provide practical and easy access to the monument. Boats could be brought across the reservoir from Glen Canyon City and Page directly up into the monument and under the bridge. What more satisfying way to see and appreciate this magnificent arch than

to float up under and view it from many angles! It would make Rainbow Bridge, and the untamed country in which it is located, accessible to many people who otherwise could never see these marvels.

Even though the engineers from the Bureau of Reclamation found that protective works for Rainbow Bridge were unnecessary, they were required to go ahead, as I have stated, under the provisions of the Upper Colorado River Authorizing Act, and draw up recommendations to the Secretary of the Interior, which the Secretary could in turn make to Congress, for the construction of such protective works. A number of proposals were considered but the one which was finally adopted for recommendation to Congress, and for which the $25 million has been requested, would do the following——

CURRENT BUDGET REQUEST

Chairman HAYDEN. Is there a budget request for that $25 million?

Senator Moss. That is the estimate for the ultimate cost. The request now is for $3.5 million to begin.

Chairman HAYDEN. Let me say that I know of no way in which Congress could be compelled to make that appropriation.

Senator Moss. I agree with you, sir.

LEGISLATION INTRODUCED

Chairman HAYDEN. To clear the matter up entirely it seems to me that legislation should be introduced to amend the act to eliminate that requirement. Has anything like that been done?

Senator Moss. Yes, sir. I have introduced a bill in the Senate, Mr. Chairman, to take the requirement out and simply provide that nothing in the reservoir should impair the bridge. In other words, if there is to be a finding that it would impair it, we still would be required to protect the monument. But it is my opinion that there is no evidence that there would be any impairment. The other provision in the authorizing act which my bill would remove says no water shall enter the monument.

Chairman HAYDEN. I think it would be well to include the text of your bill in the record.

Senator Moss. I will be glad to supply it at this point, Mr. Chairman.

(The bill referred to follows:)

[S. 3180, 86th Cong., 2d sess.]

A BILL To amend the Colorado River Storage Project Act with respect to the protection of national parks and monuments under the provisions of such Act

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the last sentence of section 3 of the Act entitled "An Act to authorize the Secretary of the Interior to construct, operate, and maintain the Colorado River storage project and participating projects, and for other purposes", approved April 11, 1956 (70 Stat. 105), is amended by striking out "be within" and inserting in lieu thereof "impair".

STATUS OF LEGISLATION

Chairman HAYDEN. Has the bill been referred to the Department for a report?

Senator Moss. It has been referred but no report has been received as yet. To return to the proposal for protective works that the Bureau of Reclamation has recommended. It would:

1. Construct a barrier dam below the bridge to keep the waters from backing up under it.
2. Construct a diversion dam above it to keep the waters of Bridge Creek from flooding behind the barrier dam.
3. Construct a tunnel to divert the Bridge Creek waters under the mountains and across into neighboring Aztec Creek whose course parallels that of Bridge Creek.

All of this, together with access roads into the area, or helicopter service to bring in the necessary equipment and supplies, could cost the people about $25 million.

After the protective works are built, there would be an annual cost inspection and maintenance work on the pumping plant which would be necessary on any of the three alternate barrier dam plans suggested.

Because of my opposition to the appropriation of $3.5 million in the fiscal year 1961 for first-stage construction of the two Rainbow Bridge Dams, and to the ultimate expenditure of $25 million for these dams, and because of my sponsorship of a bill to remove from the Upper Colorado River Authorizing Act the language requiring their consideration, I have been called an opponent of conservation. I do not feel this is fair.

I believe my record will show that I am a dedicated conservationist when it can be proved that the project is prudent and wise. Witness my sponsorship of measures to establish a national policy of conservation of our natural resources, and to preserve our shorelines, and my recent trips to conduct hearings for the Interior and Insular Affairs Committee on specific shoreline bills in Massachusetts, Texas, and California. I am also the author of a bill to protect a unique and striking shoreline in my own State by the establishment of a Great Salt Lake National Park.

PROTEST AGAINST UNSOUND CONSERVATION

But I cannot stand by and not protest an expenditure of the peoples' money being made in the name of conservation which will not conserve because it is not sound.

I do want to say this—if at some future date it can be proved that modest work is necessary because of fluctuations in the lake level, or other circumstances, then I will be the first in line to propose such works. I am too much of a conservationist and too deeply devoted to the preservation of the beauties of my native State not to do so. But I cannot stand quietly by and see $25 million squandered.

To illustrate what level the water would reach and the contour of the bridge, I have a rough sketch which I would like to hand to the committee to show that the water, when it reached its highest level would still be far below the abutments of the bridge.

I have been to Rainbow Bridge two or three times and the bridge arches over a wide canyon. But in the center of that canyon there is a little narrow strip that runs up, and it is a little narrow slit in the bottom of the canyon that would fill with water. The whole thing certainly would never be filled even when the reservoir is at its maximum height.

These charts are simply illustrative, and I realize they can't go in the record, but I would like to have them in the committee files.

Chairman HAYDEN. We will be glad to have them.

I think you made a very constructive statement. Thank you for it.

Senator MOSS. Thank you, Mr. Chairman. And I will have the bill sent down to be included.

Chairman HAYDEN. Mr. Perry.

TEXAS PROJECTS

STATEMENT OF HON. LYNDON B. JOHNSON, A U.S. SENATOR FROM THE STATE OF TEXAS, AS PRESENTED BY ARTHUR PERRY, ADMINISTRATIVE ASSISTANT

PREPARED STATEMENTS

Mr. PERRY. Thank you, Mr. Chairman. Senator Johnson could not be here this morning, but he wanted the committee to know of his interest in the Texas reclamation projects included in this bill. He has prepared statements on each one of these projects outlining their merits and urging action by the committee in line with those merits. I have the statements here and would like to submit them for the record. And I am sure the committee will give them consideration.

Chairman HAYDEN. They may be received.

(The statements referred to follow:)

STATEMENTS OF LYNDON B. JOHNSON

GOODLAND PROJECT, OKLAHOMA-TEXAS

GENERAL INVESTIGATIONS

Mr. Chairman, this project is located along the Red River downstream from the Denison Dam. The Bureau states that the study will consist of a reconnaissance appraisal of the practicability of irrigating some 15,000 acres of land which lie in noncontiguous tracts on both sides of the river. The lands could be irrigated by stream-bank pumping plants using water supplies of the Red River as regulated by Denison Dam.

No work has thus far been initiated. The 1960 fiscal year program involving $17,200, will be used to initiate a reconnaissance appraisal of the project including preliminary land classification of the project lands. The total estimated cost of the investigations is $29,300. The pending budget for 1961 requests $12,100 which will permit completion of the reconnaissance studies and in turn determine whether more detailed investigations are warranted.

Mr. Chairman, I commend the budget request to the favorable action of the committee.

LIBERTY BOTTOMS PROJECT, OKLAHOMA-TEXAS

GENERAL INVESTIGATIONS

Mr. Chairman, the project lands are located on both sides of the Red River Valley downstream from Denison, Tex. They consist of several noncontiguous tracts, aggregating about 12,100 acres of land suitable for irrigation development. Irrigation would be by means of stream bank pumping plants, using Red River water released from Denison Dam.

As of June 30, 1959, a reconnaissance report had been completed and released to local interests. This report indicated these lands were suitable for development under reclamation law, by private financing, or under the Small Projects Act. It also indicated that the project probably would be financially feasible and economically justifiable. A number of landowners in the area have indi-

cated by resolution in July 1959 an interest in a Federal development under reclamation law.

The $52,339 in the 1960 fiscal year program are being used for detailed feasibility studies which are now underway.

The total estimated cost of the investigations is $95,880. The 1961 budget requests $6,700 to be utilized in completing the feasibility report.

Mr. Chairman, I hope the committee will give favorable consideration to this request.

Prairie Dog Town Fork and Salt Fork of Red River, Tex.

GENERAL INVESTIGATIONS

Mr. Chairman, the objective of this study is to accomplish a reconnaissance appraisal of water resources potential of the Prairie Dog Town and Salt Forks of the Red River and the facilities necessary for the development of these resources for municipal and industrial water and other uses. The investigation was undertaken pursuant to Public Law 86-167, approved August 18, 1959.

The fiscal year program which embraced $88,050 will initiate a reconnaissance appraisal of the potentialities of the area with primary emphasis on an inventory of reservoir sites and studies to determine the amount of ground water and surface water available.

The total estimated cost of the investigations is $165,000. The present budget request is $50,300. The Bureau of Reclamation states that if granted the reconnaissance studies will be continued during fiscal year 1961 with the purpose of completing the report by the end of the following fiscal year.

Mr. Chairman, I hope the subcommittee will see fit to approve the budget request in order that his important study can be carried forward.

Texas Basins Project

GENERAL INVESTIGATIONS

Mr. Chairman, the Texas basins project includes that portion of the gulf-coastal area of Texas embracing the drainage basins of the Sabine, Neches, San Jacinto, Trinity, Brazos, Colorado, San Antonio, Guadalupe, and Nueces Rivers and the Lower Rio Grande. The purpose of the project investigation is to formulate, in close cooperation with the U.S. Study Commission, an overall plan of water use and control under which the tremendous natural resources of the Texas gulf basins can be developed for the maximum benefit of the local interests, the State, and the Nation.

The $667,643 in the 1960 fiscal year program is being utilized for continuation of planning on the overall plan of development and participation of the Bureau in the work of the U.S. Study Commission. It also provides for completion of a feasibility report on the Columbus Bend unit and the continuation of detailed feasibility studies of the Hochheim unit.

The original program of the Bureau of Reclamation contemplated the completion of a report on the Texas basins project by the end of fiscal year 1961. Subsequently, the U.S. Study Commission was created to formulate a basic, comprehensive, and fully integrated plan of development of the land and water resources of the area. In order to insure the Bureau's plans will be fully compatible with the plans of the U.S. Study Commission, the Bureau's report has been deferred until fiscal year 1963.

There are a number of units within the Texas basins project which can be undertaken as separate entities which will be compatible with whatever plan is adopted by the study commission. The Bureau is now engaged in feasibility investigations of these units and feasibility reports are scheduled to be completed in fiscal year 1960 for the Columbus Bend unit, in fiscal year 1961 for the Hochheim unit, and in fiscal year 1962 for the Falls City unit.

The total estimated cost of investigation of the overall plan is $5,484,855. The pending 1961 budget requests $458,000. It is noted that this amount is some $200,000 less than was available for fiscal year 1960. This no doubt will result in a serious disruption of this program and the loss of many valuable employees. Since it would be extremely difficult to replace these trained employees, a serious delay in the completion of the program could only be expected.

I understand that this apparent deficiency for fiscal year 1961 came about because of a misunderstanding concerning funding relationships with the Texas

Study Commission and that the $458,000 would be inadequate to accomplish the program.

Mr. Chairman, this is a very important project and its planning should be expedited to the fullest extent practicable. I urge that funds in the amount of $658,000 instead of the $458,000 be included in the fiscal year 1961 program for the Texas basins project.

Lower Rio Grande Rehabilitation Project, La Feria Division

GENERAL INVESTIGATIONS

Mr. Chairman, this potential project involves the repair and improvement of the district's irrigation system, which includes two pumping plants, 139 miles of canals, 22 miles of pipelines, and 153 miles of drains. Although the existing system is capable of serving the entire 26,600 acres in the district, it requires modernization and improvement for efficient and economical operation.

The La Feria division project was authorized by act of Congress on September 22, 1959.

The 1960 program involves $12,500 contributed by local interests which the Bureau states will be utilized to initiate detailed preconstruction studies leading to a definite plan report in July 1960.

The President's budget for fiscal year 1961 includes $500,000 to start construction. The total estimated cost of the investigations is $39,010. The total estimated project cost is $5,772,000.

Mr. Chairman, I hope the subcommittee may be disposed to approve the pending budget request.

Rio Grande Project, New Mexico-Texas

OPERATION AND MAINTENANCE

Mr. Chairman, this project is situated in the Rio Grande Valley extending approximately 100 miles upstream and 40 miles downstream from the city of El Paso, Tex. It serves lands under the Elephant Butte Irrigation District in New Mexico and the El Paso County Water Improvement District No. 1 in Texas.

The principal features are Elephant Butte Dam and Reservoir (storage capacity 2,206,788 acre-feet), Caballo Dam and Reservoir (storage capacity 343,990 acre-feet), irrigation distribution facilities serving 178,196 acres, and Elephant Butte powerplant (24,300 kilowatts) serving three private utility companies, six public-owned utilities, and two military defense establishments. The project is also required by international treaty to furnish 60,000 acre-feet of water annually to Juarez Valley, Mexico. It also furnishes waste and excess water to Hudspeth County Conservancy and Reclamation District No. 1, Hudspeth County, Tex. (approximately 18,330 irrigable acres), under a Warren Act contract.

Construction of the project has been completed and all features are operating. The Bureau of Reclamation operates the project. Irrigation water users advance funds for operation and maintenance of irrigation facilities. Irrigation construction costs are being repaid according to terms of repayment contracts by the Elephant Butte Irrigation District (New Mexico) and El Paso County Water Improvement District No. 1 (Texas).

The 1960 fiscal year program is financed by $398,982 of appropriated funds and $1,100,000 of advances by local water users. The advanced funds will be used for operation and maintenance of the irrigation facilities and the appropriated funds will be used for operation and maintenance of power facilities ($383,432) and for flood control and treaty requirements ($15,550).

Mr. Chairman, $421,000 is requested in the pending 1961 budget. The Bureau states that these funds will be augmented by $1,035,000 of funds advanced by local water users to provide a total program of $1,456,000. The funds advanced will be used for operation and maintenance of the irrigation facilities and the appropriated funds will be used for operation and maintenance of the power facilities ($403,500), and for flood control and treaty requirements ($17,500).

Mr. Chairman, I hope the budget request may be approved.

FALCON DAM PROJECT, TEXAS

OPERATION AND MAINTENANCE

Mr. Chairman, this project consists of an international dam on the Rio Grande in Zapata County, Tex., under the jurisdiction of the International Boundary and Water Commission. There are two powerplants, one on each side of the river. Each powerplant has a nameplate capacity of 31,500 kilowatts. The one plant is operated by the United States, the other by Mexico.

Construction of the project was provided by the treaty with Mexico dated November 27, 1945. Joint construction by the International Boundary and Water Commission, United States and Mexico, was approved by Congress on October 6, 1949. Electric energy generated at Falcon Dam, which is available to the United States, is delivered to the Secretary of the Interior for transmission and disposition in accordance with the Reclamation Project Act of 1939.

The dam and powerplants are functionally complete. The Bureau of Reclamation, by delegation of secretarial authority, markets the U.S. portion of the power produced and has it placed under contract. The work of administrating these contracts will continue as long as power is available. The Bureau reports that $54,697 was expended through June 30, 1959, in power marketing activities. The $4,866 available to the Bureau for the fiscal 1960 program will be used for financing activities involved in contract administration and billing activities.

The 1961 budget requests $5,000 to be used in administrating the power sales activities of the Bureau of Reclamation.

Mr. Chairman, I commend this request to the favorable action of the committee.

RIO GRANDE PROJECT, TEXAS

EL PASO COUNTY WATER IMPROVEMENT DISTRICT NO. 1

CONSTRUCTION AND REHABILITATION

Mr. Chairman, this rehabilitation program relates to irrigation features in El Paso County, Tex. The works are operated and maintained by the El Paso Water Improvement District No. 1. The basic authorizing legislation for rehabilitation and betterment work is included in the act of October 7, 1949.

The fiscal year 1960 program which includes $424,125 provides for acquisition of construction equipment, initiation of replacement and rehabilitation of canal structures, repairs on Franklin Canal lining and replacement and rehabilitation of lateral structures in the El Paso Valley. The Bureau also states that cleaning of drains will begin.

The total estimated project cost is $2,300,000. The pending 1961 budget requests $575,000, which the Bureau states will provide for completion of rehabilitation activities for Riverside diversion dam, Franklin heading, Tornillo heading, Mesilla Valley drains, and general property. Rehabilitation of other canals, laterals, and drains will continue. The acquisition of construction equipment will be completed.

Mr. Chairman, I hope the committee may be disposed to act favorably on this request.

SAN ANGELO PROJECT, TEXAS

CONSTRUCTION AND REHABILITATION

Mr. Chairman, this multipurpose project is located in west Texas. It will provide full water supply to serve 10,000 acres, municipal and industrial water for the city of San Angelo, Tex., flood control, fish and wildlife, and recreational benefits.

As of June 30, 1959, repayment contracts with the San Angelo Water Supply Corp. and the Tom Green County Water Control and Improvement District No. 1 were executed. Preconstruction engineering was underway.

The fiscal year 1960 program ($4,139,026), contemplates the award of the contract for construction of Twin Buttes Dam and Reservoir. Work is underway on the right-of-way program and relocation of existing facilities in the dam and reservoir area. Design data on other features is being collected and required service facilities acquired.

The total estimated cost of the project is $32,434,000. The 1961 budget requests $11 million. The Bureau of Reclamation states that the program provides for the continuation of construction on Twin Buttes Dam and installation of the high pressure gates and other equipment in the outlet works. The acquisition

of land and land rights for the reservoir and relocation of existing property in the reservoir area is scheduled for completion. Right-of-way for the main canal and laterals will be acquired and construction initiated on these features.

Mr. Chairman, I hope the committee will see fit to approve the budget request for the continued construction and rehabilitation of this important project.

Rio Grande Project, New Mexico-Texas

Elephant Butte Power Storage Division

construction and rehabilitation, drainage and minor construction

Mr. Chairman, this project includes Elephant Butte Dam and Reservoir, a power system consisting of one powerplant and switchyard at Elephant Butte Dam, and transmission lines and substations serving towns in New Mexico located in this area and El Paso, Tex.

The facilities of the project are completed. The fiscal 1960 program of $43,875 includes the work of collecting engineering and technical data, preparation of analyses, reports, charts, and exhibits, rendering advice and consultation, and serving as witnesses. The Bureau states that this information has been requested by the Department of Justice in defense of the *A.T. & S.F. Railway Company* v. *United States* suit and possible other suits as a result of Private Law 767, of the 84th Congress. The suits are for compensation for the taking of, or for damage to, real or personal property in the flooding of lands in the Rio Grande Valley near San Marcial, N. Mex., in 1929, which flood allegedly resulted from construction of Elephant Butte Dam.

The total estimated project cost is $16,738,735. The pending 1961 budget requests $26,120, to continue the work outlined above and I hope the committee may see fit to approve this amount.

Lower Rio Grande Project, Texas

Mercedes Division

construction and rehabilitation

Mr. Chairman, the Mercedes division is located in the lower Rio Grande Valley of Texas. The division is an old irrigation project which now provides a full water supply for the irrigation of 68,000 acres. The present work consists of complete rehabilitation of deteriorated facilities.

As of June 30, 1959, contracts were awarded for the purchase of natural gas engines, for concrete pipe, and for a 42-inch trencher. Design data was being collected on other features of the project.

The total estimated cost of the project is $10,800,000. The fiscal year 1960 program calls for completion of the enlargement of the storage basin and repairs and minor replacements to the pumping plant. The main canal is to be rehabilitated and the first three of several construction contracts to repair or replace laterals and the relift pumping plants are to be awarded. Collection of design data on the drains continues.

The 1961 budget requests $2,500,000 for completion of installation of three natural gas engines in the river pumping plant and for the award of four construction contracts in connection with the program for laterals and relift pumping plants. The Bureau states that work will continue on construction contracts previously awarded and preconstruction work on laterals will continue to interefere as little as possible with water deliveries. Collection of design data on drains will continue.

Mr. Chairman, I very much hope the committee will approve this request.

Lower Rio Grande Project, Texas

La Feria Division

construction and rehabilitation

Mr. Chairman, the La Feria division is located in Cameron County in the lower Rio Grande Valley of Texas. This division is an old irrigation project which now provides a full water supply for the irrigation of 26,660 acres. The present program consists of complete rehabilitation of deteriorated facilities.

The project was authorized September 22, 1959. As of June 30, 1959, the project was in a planning status.

The pending budget for 1961 requests $500,000 to provide for the initiation of rehabilitation work on the pumping plant and laterals and the collection of field data on other features of the project. The total estimated cost of the project is $5,772,000.

Mr. Chairman, this is an important project to the lower to Rio Grande Valley section of Texas and I very much hope that the committee may see fit to approve the pending budget request.

DONNA IRRIGATION DISTRICT, HIDALGO, COUNTY NO 1, DONNA, TEX.

LOAN PROGRAM

Mr. Chairman, the loan in the Donna Irrigation District of $4,067,000 is to be used for the rehabilitation and betterment of the existing irrigation system. The work includes reconstruction of the pumping plants, canal lining, conversion of open canals to pipe, repair, or replacement of structures, and general rehabilitation of the system.

The loan is under the Small Reclamation Projects Act of 1956. It was approved by the Secretary of the Interior and was before the Bureau of the Budget for clearance before being sent to Congress. It was later forwarded to Congress on August 18, 1959. It has since completed the necessary 60 days before the Insular and Interior Affairs Committee of both the House and the Senate. The loan is therefore eligible for an appropriation of funds. The repayment contract has been executed and validated.

The total estimated project cost is $4,420,000. The district will provide $353,000 toward the cost of construction.

The 1961 budget request is for $4,061,000. This is the full amount of funds to be appropriated for this loan. It is less than the amount of the loan because of the expenditures from previous appropriations for the examination of the loan proposal by the Bureau.

Mr. Chairman, I hope the committee may see fit to give approval to this request.

BUREAU OF RECLAMATION

STATEMENT OF F. E. DOMINY, COMMISSIONER, BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR; ACCOMPANIED BY N. B. BENNETT, ASSISTANT COMMISSIONER FOR POWER AND GENERAL ENGINEERING; W. I. PALMER, ASSISTANT COMMISSIONER FOR IRRIGATION AND PROJECT DEVELOPMENT; A. R. GOLZE, ASSISTANT COMMISSIONER FOR ADMINISTRATION AND FOREIGN ACTIVITIES; B. G. DAVIS, CHIEF, DIVISION OF PROGRAM COORDINATION AND FINANCE; D. R. BURNETT, CHIEF, DIVISION OF PROJECT DEVELOPMENT; G. G. STAMM, CHIEF, DIVISION OF IRRIGATION AND LAND USE; AND D. S. CAMPBELL, CHIEF, DIVISION OF POWER—Resumed

NEW LANDS VERSUS SURPLUSES

Chairman HAYDEN. Mr. Dominy, I am sure you are aware that a number of people have raised the question, Why bring new areas under irrigation in view of the surplus of certain crops? I think the committee would like to have your views on this matter.

Mr. DOMINY. Mr. Chairman, I am indeed aware of that very proper inquiry that is being made by Members of Congress and by the public generally. We in reclamation believe there is a full and proper answer which justifies proceeding with reclamation development.

The imbalance in the Nation's agricultural plant constitute one of the most vexing domestic problems faced by the American people today. The apparent inconsistencies between the programs of the

several Federal agencies are difficult for the public to understand even after much careful review. The question, Why appropriate money for Federal reclamation projects at a time when land is being put into the soil bank? is frequently asked and seldom adequately answered. An equally logical question, however, would be, Why appropriate Federal money for basic research in agriculture? Yet each year the Federal budget includes a significant sum for this purpose. For fiscal year 1961 an amount equal to the total appropriation for reclamation is in the budget for research in agriculture—a major portion of which is directed to agricultural production—how to produce more and better crops. How to get, in some instances, greater yields from crops that are in surplus.

CROPS IN SHORT SUPPLY

In terms of the short range—the period right now—or for a few years ahead there is no question but what we have enough food and fiber to accommodate our present population. There are some crops, however, that even now are in short supply. A comparison of production with demand discloses that abundance exists in a number of our basic crops and surplus exists in a relatively few. Most significantly, deficiencies according to our nutritionists still plague us in many of the health protective foods. Many of these foods grow best in the irrigated West, and supply our needs during winter months when many other producing areas are blanketed with snow.

HEALTH PROTECTIVE FOODS UNDER IRRIGATION

As a matter of fact, our crop reports show that many of the health protective foods that are in our supermarkets on a year-round basis are produced exclusively on irrigated lands in the West during the winter season.

We are, however, not considering agricultural research or Federal reclamation in terms of what they will do to production right now or tomorrow, or even 5 or more years from now. We live better today because of the investment made in agricultural research and reclamation 10, 15, and even 50 years ago.

Similarly, some of the benefits of agricultural research now being conducted may first become apparent to our grandchildren in some indefinite period ahead. In a like manner, the reclamation projects we are now investigating or building will not reach their full productive potential for many years, and the question we should logically now ask is, What should be our position in terms of the long-range point of view? One thing is abundantly sure—we cannot wait until dire need is upon us before we do our research or our planning or our building of these projects from which our Nation has gained so much.

SURPLUSES FROM RECLAMATION DEVELOPMENT

For a moment let's consider surpluses in terms of what they are and what portion of these crops comes from Federal reclamation developments now completed and in production.

Four crops make up about seven-eighths of the value of the commodities held by the Commodity Credit Corporation under loan or

in inventory. These are tobacco, corn, wheat, and cotton. Farms on reclamation projects do not grow any tobacco. Reclamation farms grow about one-half of 1 percent of the U.S. production of corn and about 1½ percent of the total wheat crop. Corn grown on reclamation projects provides a winter feed base and complements the use of the vast area of western rangeland.

Now this is important, because on reclamation projects great quantities of hay and roughages are produced which cannot stand shipment. As you know, bulky products like hay, the freight rates eat up the value after a very short transport, and it is very important to the development of the West to have this feed base and grains available where the range cattle are produced. This is of the utmost interest to the public too in providing cheaper beef and cheaper lamb over the long pull.

Chairman HAYDEN. It used to be that the animals were sent out of the irrigated areas to be finished off for the market. Is this still the practice?

Mr. DOMINY. That used to be the case almost entirely. Now much of it is being fed on the irrigated farms themselves. For example, California has become one of the largest producers of beef in their slaughterhouses. The cattle and sheep from the Mountain States used to all come east for slaughter but now many are moving west, because we are raising feed and can finish them in that area. Of course, that is where the biggest population gain is, too.

In the traditional one-crop wheat areas of the West, the introduction of irrigation results in diversification of farming operations to include other crops more profitably grown, and the acreage and production of wheat accordingly is reduced significantly when irrigation comes into the one-crop wheat area. Wheat is not a crop that is economically sound to produce on irrigated farms. And the wheat actually produced on irrigated land is frequently in connection with the establishment of alfalfa and other crops, using wheat as a nurse crop. And for the most part that wheat is then fed rather than put into the loan program.

FIFTEEN-ACRE EXEMPTION UNDER WHEAT PROGRAM

Senator DWORSHAK. Mr. Dominy, under the wheat program there is a 15-acre exemption. Do you know what percentage of the irrigated farms participate in that exemption program and do actually raise 15 acres?

Mr. DOMINY. It is not a common practice on irrigated lands of the West to avail themselves of that opportunity. That is used primarily in the humid areas of the East.

Wheat yield doesn't increase sufficiently under irrigation as compared to dryland cultural practices to justify devoting the higher priced land and the higher cost of production that goes with irrigation farming to wheat production. Sometimes when we bring a new project into a wheat area, the farmers are wheat-minded, they have grown wheat for years, and they sometimes grow wheat for a year or two while they are becoming converted to irrigation-type agriculture. But our experience shows that they go out of wheat production fast when they have irrigation water available, because they can make

greater returns for the increased labor and capitalization required under irrigation by growing other crops.

Senator DWORSHAK. In Idaho we brought in about half a million acres of land under private development in the last decade, and in many instances acreage which had been dry-farmed for wheat and produced 15 or 20 bushels to the acre have had wells, underground wells dug, and as a result, the production of that wheat has increased from the small average to as much as 75, 80, or 90 bushels an acre. But you don't find that to be a fact in the Federal projection?

Mr. DOMINY. Well, there is an example of where it really isn't intensively farmed under irrigation. I know that area that you are referring to. And they can increase the yield of wheat by an application or two of water. But if they had the expense of a complete irrigation system and a full water supply such as would be needed for alfalfa or sugar beets or row crops, they couldn't afford to grow wheat, and would shift to these other crops.

STANDBY WELLS

Chairman HAYDEN. Isn't it true that the wells are there as a standby in case of drought?

Mr. DOMINY. Yes, sir; that is true more or less in the type of agriculture he is referring to. The man irrigates if the rains don't come, and he usually only applies water once or twice during the season.

Senator DWORSHAK. No, there is a large area where they increase from 15 to 20 or 25 bushels per acre and two and three times that much, and the use of water has proved very profitable, and there is an intensive development in that area, but it is all done privately, and so I am not aware of it, because in an irrigated project you can change from dryfarming to irrigation, irrigated farming, because you already have irrigation.

Mr. DOMINY. That is true in some areas.

Production of cotton in the irrigated West is vastly more efficient than in many of the older nonirrigated cotton-producing areas. Yields have been as high as 3½ times the average obtained in some areas in the United States. All domestic long staple cotton is grown under irrigation in the Southwest. Also, a superior short staple cotton is grown because it is possible to control more of the factors affecting the quality of cotton.

For instance, in irrigated cotton you never have the break in the fiber that results from a dry spell in the growing season, and you can't guarantee against that in dryland cotton culture practice.

Altogether, the corn, wheat, and cotton grown on reclamation farms makes up, at the most, about 1.8 percent of the value of crops under loan or in the Commodity Credit Corporation inventories.

LONG STAPLE COTTON

Chairman HAYDEN. Well, the kind of cotton that is grown in my country is the kind the mills want, and it doesn't stay in the loan.

Mr. DOMINY. Yes, sir; the long staple cotton—up until 1959, I believe, the farmer was free to plant—I think 1959 was the first year that domestically grown long staple cotton was considered to be a surplus crop. Even now we import about one-third of our requirement of this crop.

Chairman HAYDEN. There is a heavy demand for long staple cotton, and the more we produce, the less dependent we are on imports.

Mr. DOMINY. That is right.

Now the remaining 200-odd crops produced on Federal reclamation projects are largely not associated with surpluses. Many of them are still in short supply and many are required to provide a balanced diet.

Now occasionally there is a surplus of some of these crops, some particular fruit or vegetable or nut, but they can't be stored indefinitely like corn and wheat and cotton, and therefore the surplus is of very short duration, and is accounted for very quickly by spoilage.

Considering now the requirements of future years for agricultural production—competent demographers of the U.S. Department of Commerce tell us that the year 2010, just 50 years from now, our population is expected to reach 370 million people. If these people are to enjoy present dietary standards, and if yields now being obtained are to continue to be attainable, by 1975 we would need the production of an additional 208 million acres.

By the year 2010, we would need to find the added production of the equivalent of 417 million acres. Since 1920, the land area actually producing crops has remained relatively constant at about 400 million acres. We have managed to feed and clothe our people since that time on that acreage by (1) improved technology—better seed and planting stock, application of fertilizers, widespread use of insecticides and fungicides, and so forth; (2) converting our agricultural plant from a horse and mule powered operation to a mechanized operation—this one item alone liberated about 80 million acres of good cropland for the production of food for humans rather than feed for horses.

(3) By the development and widescale use of synthetic fibers rather than total reliance on cotton, flax, and wool; and

(4) By a reduction in our export market.

Since we are now almost completely mechanized, and since we are using synthetic fibers at a rate that appears to be reaching the optimum level and since our export market appears to be at a minimum, we cannot look to adjustments in these areas for meeting additional demands. Instead, we must find the sources of production to feed and clothe our rapidly increasing population by concentrating on technological advancement and by land use adjustments including reclamation.

NUTRITIONAL DEFICIENCIES

Little recognition has been given the subject of nutritional deficiencies. We may be relatively well off in terms of the rest of the world, two-thirds of which is said to be undernourished. However, a recent survey of dietary levels (USDA Cir. ARS 62–6, 1957) shows that more of the protective foods—fresh vegetables, fruits, meats, and dairy products—are required to meet adequate dietary standards.

Irrigated farms in the West supply many of these needed products. For example, from the Southwest we receive large supplies of winter fruits and vegetables, citrus, nuts, olives, lettuce, grapes, and dozens of other nutritious items which are grown almost exclusively under irrigation. Expansion in these crops must take place consistent with the population increases if we are to maintain even the present dietary levels.

Irrigation farming in the West enjoys a complementary rather than a competitive relationship with the whole of the country's agriculture. Nonirrigated farmland producing the bulk of the crops in surplus is largely confined to a one-crop economy and cannot diversify or change in response to demand.

Other factors being equal, the irrigation farmer in the West is capable of shifting his production from surplus crops to those that are currently needed in the Nation.

Not only does increased population exercise a marked demand on crop production, but its effects are also measured in terms of reduced land base. We are losing 3,000 acres per day or well over a million acres a year through urban expansion—airports, roads, and housing.

And as a matter of fact, Mr. Chairman, I think the Congress of the United States could well be considering the desirability of encouraging zoning so that the industrial expansion would be restricted insofar as physically possible from being put on good agricultural lands.

I frequently see class 6 nonagricultural land being passed up because it is a little more expensive to develop as an industrial site, and good class 1 agricultural land being taken out of high production and put into an industrial use. And I don't think this is in the national interest.

I think there will come a time very soon when we will regret that we didn't take cognizance of our future need and try to encourage Federal, State, and local zoning so that we could prevent that very thing.

PROPOSED NOSE DAM PROJECT

Senator DWORSHAK. Has the Bureau of Reclamation taken any official position on the proposed Nose Dam in Montana, where, as I recall, about 9,000 acres of irrigated land would be flooded?

Mr. DOMINY. The Bureau testified when that report by the Corps was presented to Congress. As I recall we have not made an official report. But we did testify informally.

As I recall, the benefits of the project offset the losses from the retiring of those acres, but certainly that should and must be taken into account in determining whether or not that project is in the national interest.

Senator DWORSHAK. For most of these multipurpose projects there is included some irrigation development, but in this case there is no irrigation development, but actually 9,000 acres are being withdrawn. Is that true?

Mr. DOMINY. I know there are some very valuable lands in the reservoir area that would be withdrawn. And that must be taken into account.

Senator DWORSHAK. In determining the appropriateness of the other land you referred to.

Mr. DOMINY. Additionally, a half million acres are lost through soil erosion and other causes. Thus the two lines of receding agriculture base and increasing agricultural demands are rapidly converging and the problem is, can we keep them from crossing to our detriment? Vigorous and courageous action now would appear to be indicated.

Water resource development under Reclamation is, we believe, entirely consistent with sound, national long-term agricultural objectives because:

(1) It provides the most important basic element to a successful regional and national economy—a stable agriculture.

(2) It helps to insure adequate future food and fiber for our rapidly growing population.

(3) It complements and enhances our overall agricultural economy, tending to alleviate, rather than add to, the existing imbalances.

The demand on our agricultural plant will be tremendous and in terms of the long-range point of view every productive acre of land and every drop of moisture that falls must be put to its highest and best use.

I have asked Assistant Commissioner Palmer to bring before the committee a set of graphs and charts which have been worked up, not from data exclusively within the Bureau of Reclamation, but from data available from other departments and agencies of Government, to bring to you a concise picture of some of the things I have been referring to. And, Mr. Chairman, if the committee would like to take a little more time, I believe it would be profitable to have Mr. Palmer explain that.

Chairman HAYDEN. Very well.

Mr. DOMINY. Mr. Palmer.

RECLAMATION PLANNING AND THE NATION'S NEEDS

Mr. PALMER. Mr. Chairman and Senator Dworshak, we have attempted to assemble a group of graphs that we have used in our own programing—in our own attempts to gear our reclamation planning and program to supportable needs so that we could bring to the committees of Congress a program in tune and in phase with the Nation's needs.

I will go briefly through these charts. They demonstrate, I think, very clearly the points that the Commissioner has made in his presentation.

The first chart, titled "Population Trends Compared With Agricultural Development," sets up a comparison with 1880 as the comparison base point. It is on ratio scale—the intensity increases as you go up—and a number of factors are compared. It attempts to relate population growth and land use. The light gray area shows the growth recorded in the West. Starting from 1880, the West has doubled its population about every 15 or 20 years. This rate of growth compares with the more heavily shaded area which shows a lower rate of national population growth.

On the same chart, the upper dotted line traces the acreage used for crops. You will note it increased sharply until 1920, and from 1920 until now it has been virtually flat. This is about 400 million acres, as the Commissioner indicated.

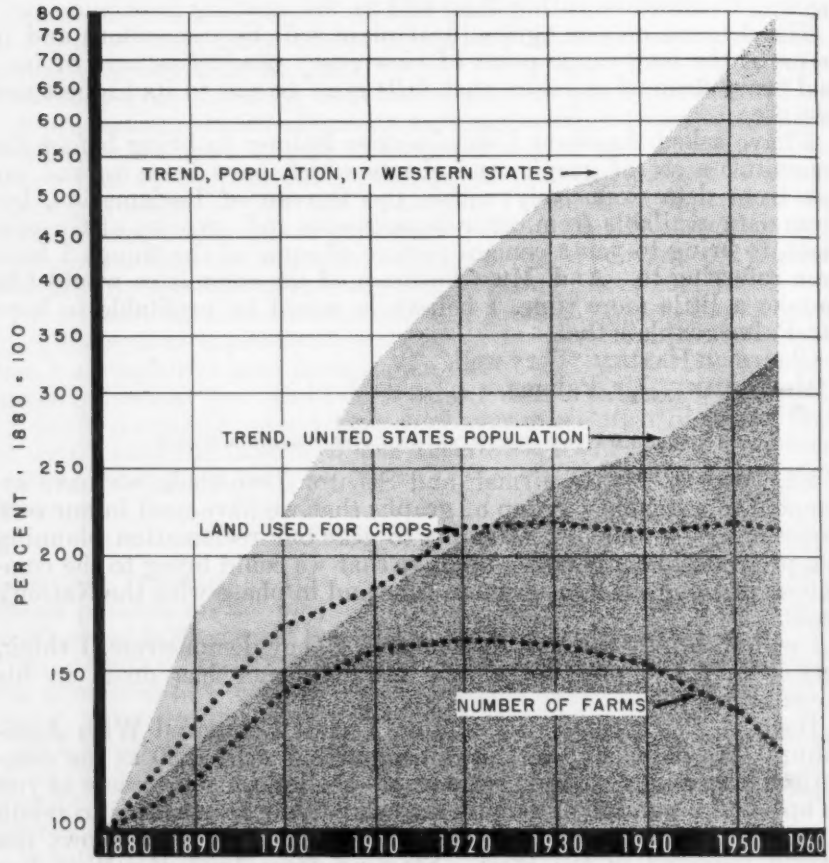
The lower dotted line is of significance, we think, because it demonstrates the number of farms in the country. This number has gone down since about 1920, and quite sharply down since about 1940, evidencing the increase in the size of the farms, with the agricultural plant remaining constant, or relatively so, and with the number of farms going down. We think it is significant, because it indicates a departure from the family-sized farm.

(The chart referred to follows:)

CHART 1

POPULATION TRENDS compared with AGRICULTURAL DEVELOPMENT

1880 - 1955



Source: Department of Commerce

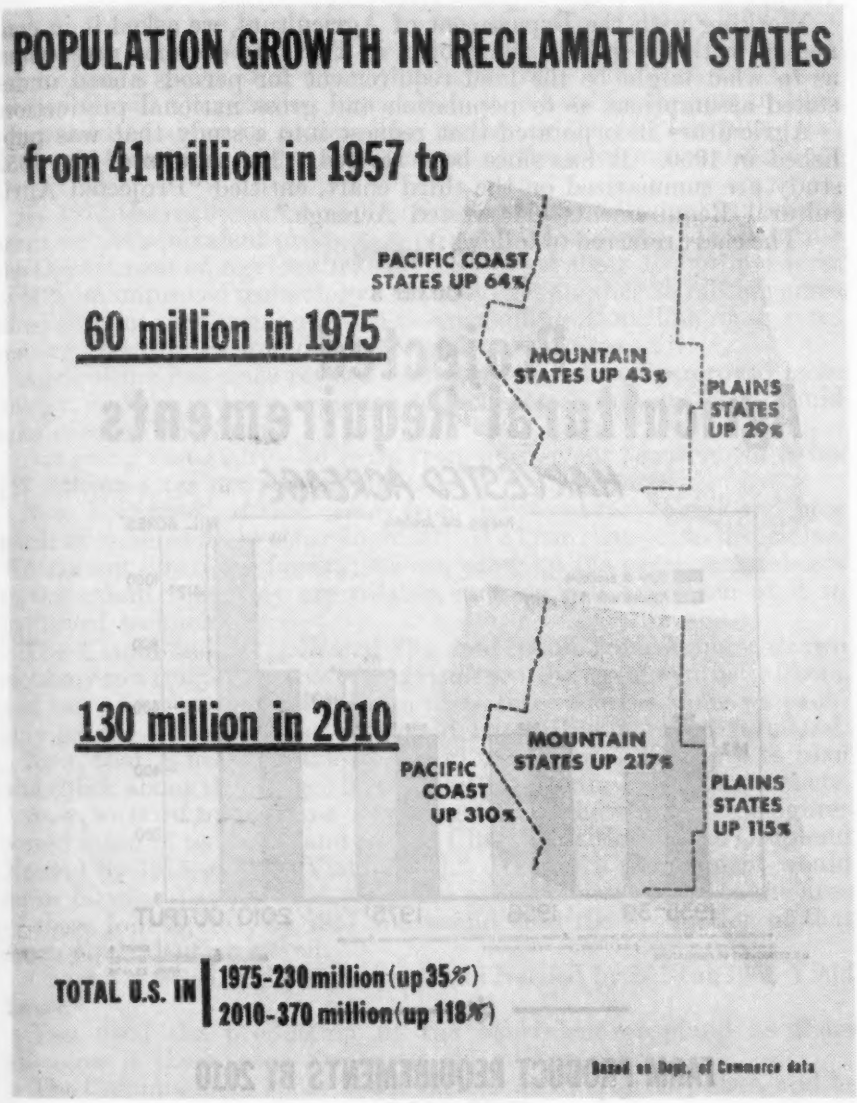
Now, we believe that the population trend in the West and in the Nation is the point from which you start your planning process. We note the increased requirement for accelerated production, not only for the West but for the Nation as a whole.

The second chart is titled "Population Growth in Reclamation States."

Looking ahead, from 41 million people in the West in 1957 to a Department of Commerce estimate of 60 million people there by 1975, this would be the distribution that you would find. The Pacific coast population is expected to be up 64 percent. The Mountain States population would be up 43 percent, and the Plains States population up 29 percent.

(The chart referred to follows:)

CHART 2


POPULATION GROWTH IN RECLAMATION STATES
from 41 million in 1957 to
PACIFIC COAST STATES UP 64%
60 million in 1975
MOUNTAIN STATES UP 43%
PLAINS STATES UP 29%
130 million in 2010
MOUNTAIN STATES UP 217%
PACIFIC COAST UP 310%
PLAINS STATES UP 115%
TOTAL U.S. IN 1975-230 million (up 35%)
2010-370 million (up 118%)
Based on Dept. of Commerce data

Looking ahead to 2010, which was the target date the Commissioner used, the population of the Pacific coast will be up 310 percent. The population of the Mountain States will be up 217 percent, and of the Plains States, 115 percent.

You are projecting your requirement for resource development against the 1975 population estimate of 230 million nationally, up 35 percent for the Nation as a whole as compared to 64, 43 and 29 percent, respectively, for the Pacific, Mountain and Plains States, or for year 2010, up 118 percent for the Nation as a whole as against 310, 217, and 115.

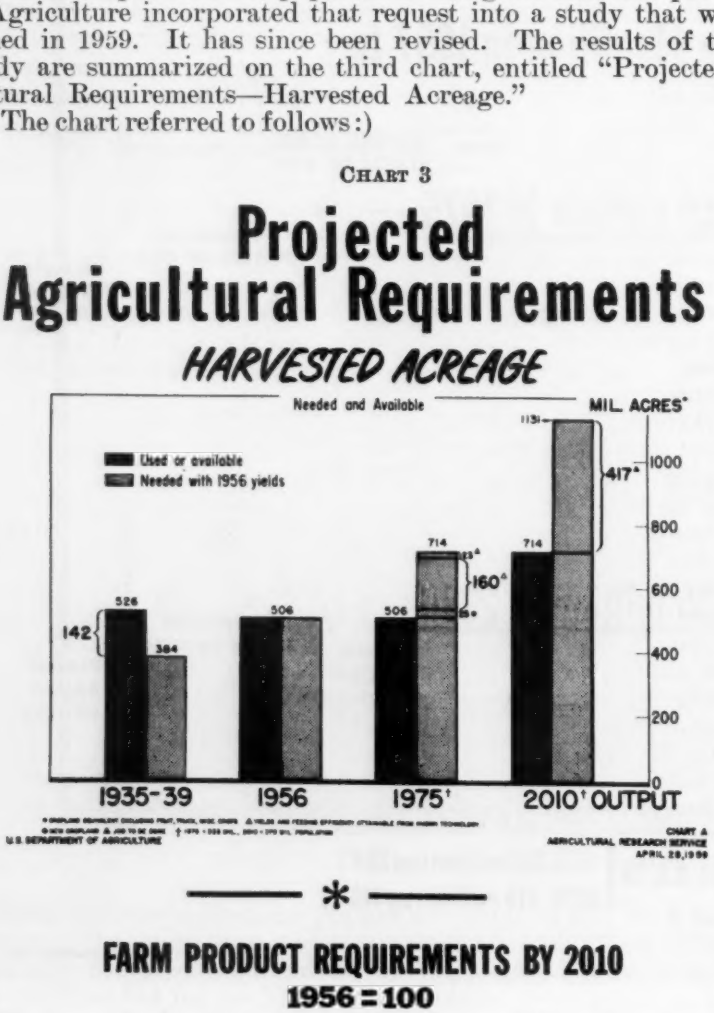
We believe that the requirement for accenting research and development in the West is evident from that analysis.

Working with the Department of Agriculture, we asked it in connection with the gulf basins project in Texas, to do some projections as to what might be the land requirement for periods ahead under stated assumptions as to population and gross national production.

Agriculture incorporated that request into a study that was published in 1959. It has since been revised. The results of the 1959 study are summarized on the third chart, entitled "Projected Agricultural Requirements—Harvested Acreage."

(The chart referred to follows:)

CHART 3



*

FARM PRODUCT REQUIREMENTS BY 2010
1956 = 100

Meat Animals	237
Dairy Products	230
Poultry	250
Eggs	220
Cereals and Potatoes	200
Fruits and Vegetables	255
Feed and Seed	200

from USDA report of June 1959 A 50 YEAR LOOK AHEAD AT U.S. AGRICULTURE

The black bar in each instance indicates the acreage used or available. The gray is the acreage needed at both at given points in time. In 1935 to 1939, the base period, we had considerably more land than we needed. By 1956 it had gotten pretty well in balance. This is, I appreciate, a point, for when you figure crop surpluses and Commodity Credit Corporation inventories, it is hard to see how in 1956 you would be about in phase. But remember the crop surplus total is maybe something less than 5 percent of the total national production.

By 1975 the requirement would be 208 million additional equivalent acres, or the equivalent production of 208 million acres. At that time the Department of Agriculture said it could get about 160 million acres of it from improved technology. It could get another 25 million acres of equivalent new cropland with the remaining 23 million or so acres coming from irrigation, drainage, and other sources.

Agriculture has since revised its figures to indicate improved technology, and the orderly approach to reclamation and drainage would take care of this figure.

But going on to 2010—50 years from now—your requirement is for 417 million acres not now in sight.

Now, how much of that comes from improved technology and how much of it comes from other sources? We have that yet to determine. We can cut down the forests; we can plow up the open pasturelands to the extent that they are tillable, and we will get much of it in improved technology.

The Commissioner indicated the conversion from a horse-drawn economy to a tractor economy in agriculture, the use of synthetic fibers, and loss of export market. From those three sources alone we probably gained the equivalent of around 100 million acres of farmland.

Now, that is not available for us in the future. We have to plan and think about this target in year 2010 if we are going to get there.

Now, we tried to put some charts together to show what these figures would mean in terms of land areas. Chart 4 is titled "More Cropland Needed by 1975 at 1956 Yield Level." The 1975 requirement would mean farmland at the 1956 yield, the average yield, equal to the area of these four States; by 1957 you would need the production of that much equivalent cropland.

Chart 5 is titled "Still More Cropland Needed by 2010 at 1956 Yield Level."

You need the production of the equivalent cropland as there are acres in these seven States, or 417 million acres.

The Commissioner spoke about the nature of crop surpluses, and he indicated the very high percentage of the total Commodity Credit inventories and loans in four crop groups.

These are shown on this chart titled "Reclamation and Crop Surplus." Each of these small circles, of course, depicts 100 percent for the commodity in question, the little thin slice represents the Reclamation contribution in each of those crop groups. The percentage of the surplus grown on Reclamation farms is small.

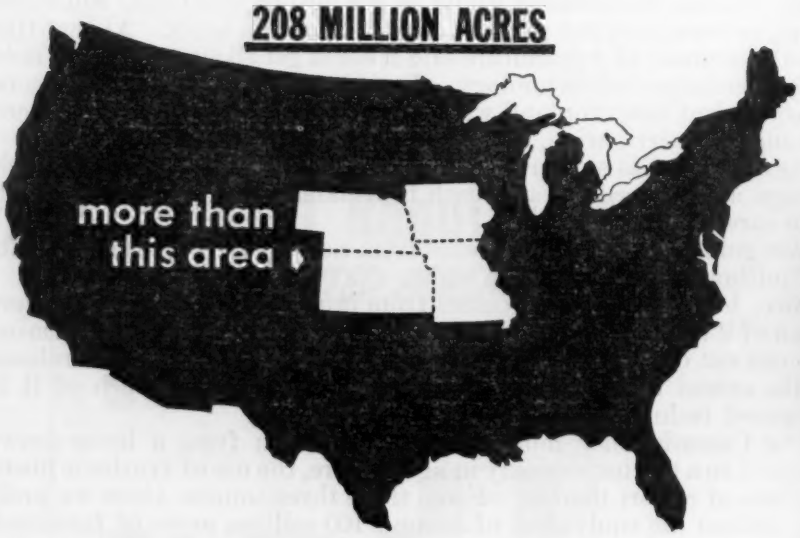
Senator Dworshak, in passing, you might be interested in knowing that irrigation of the Columbia Basin so far has cut the total production of wheat by about 50 percent. While you get more yield per acre, the farmers don't plant as many acres.

(The charts referred to follow:)

CHART 4

MORE CROPLAND NEEDED BY 1975
AT 1956 YIELD LEVEL

208 MILLION ACRES



POSSIBLE SOURCES:

KNOWN TECHNIQUES	160 MILLION ACRES
CONTINUED RECLAMATION & DRAINAGE	25 MILLION ACRES
MUST START NOW TO GET	23 MILLION ACRES
TOTAL NEEDED	208 MILLION ACRES

Source: Dept. of Agriculture, April 28, 1959

CHART 5

STILL MORE CROPLAND NEEDED BY 2010

AT 1956 YIELD LEVEL

417 MILLION ACRES

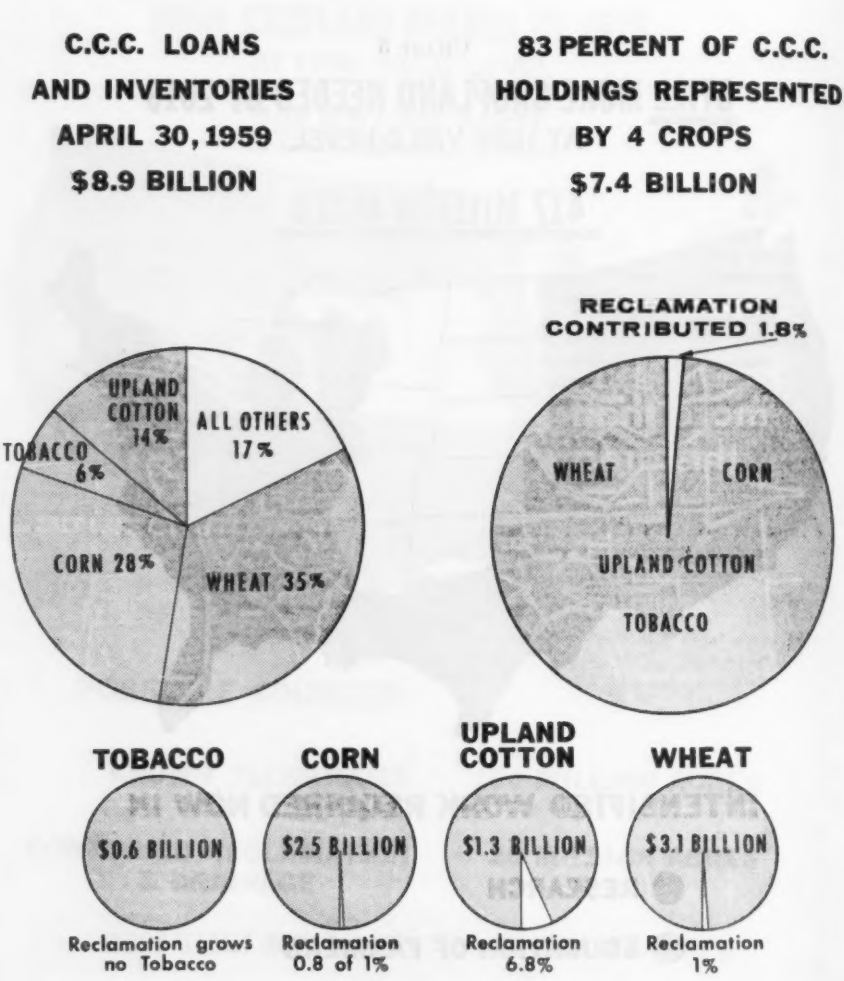
INTENSIFIED WORK REQUIRED NOW IN

- RESEARCH
- EDUCATION OF FARMERS
- SOIL CONSERVATION, DRAINAGE, ETC
- IRRIGATION PLANNING & DEVELOPMENT

Source: Dept. of Agriculture, April 28, 1959.

CHART 6

RECLAMATION AND CROP SURPLUS



DRY WHEAT FARMING

Senator DWORSHAK. Most of that land that was put under irrigation was used for dry wheat farming.

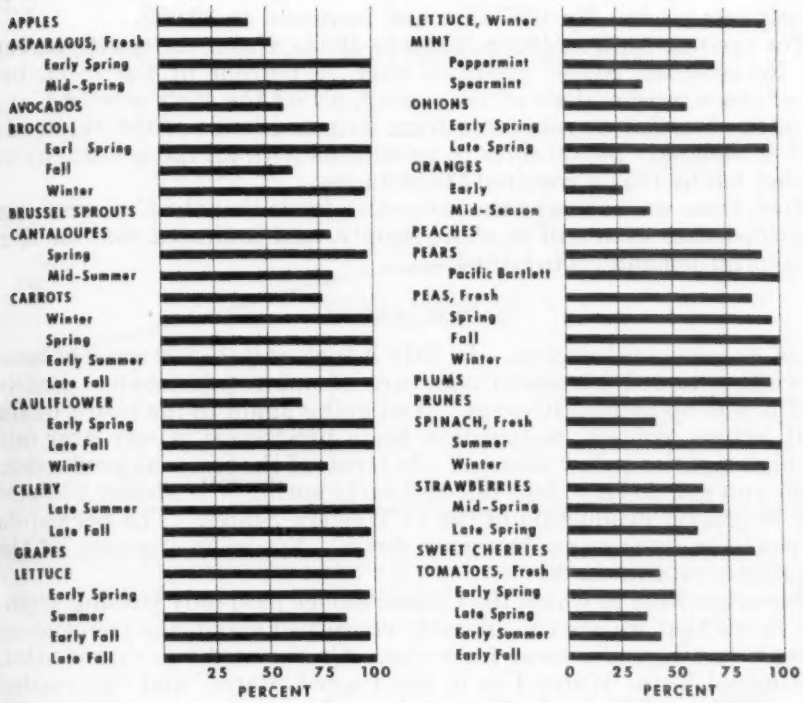
Mr. PALMER. Yes, sir.

There are 200 or so other crops grown on Reclamation projects. Let's consider some of these on the same basis we did the four that constitute 83 percent of the total surpluses.

CHART 7

PROPORTIONS OF MAJOR FRUIT AND VEGETABLE CROPS GROWN IN THE 17 RECLAMATION STATES

SHOWING PRINCIPAL SEASONAL PRODUCTION



THE RECLAMATION STATES PRODUCE **ALL** COMMERCIAL

ALMONDS	DATES	FILBERTS	HOPS
APRICOTS	ENGLISH WALNUTS	GARLIC	LEMONS
ARTICHOKES	FIGS	HONEYDEW MELONS	OLIVES
	RAISINS		

Source: Reports of Department of Agriculture

This chart titled "Proportions of Major Fruit and Vegetable Crops Grown in the 17 Reclamation States" will aid in this. Each bar indicates the percentage of each of these crops produced in the irrigated West. These figures again are from the Department of Agriculture sources.

The Reclamation States, or the 17 Western States, produced virtually all of the commercial production of the crops listed below this line here. By crop and season of production the contribution of the Reclamation States is shown above the line. You will note that 40 percent or so of our apples are grown in the West. Over half of the asparagus, over 75 percent of the broccoli, nearly 90 percent of the

brussels sprouts, and so on, as the chart would indicate, were produced in those States.

BROCCOLI AND CARROTS

Now, along with that, there is a very interesting and a very significant point that I would like to identify for you. In 1918, using that as a base, there were 13,000 acres of broccoli in the country—wait a minute—1944, as late as 1944 it took only 13,000 acres of broccoli to supply our needs. By 1957 that had increased to 39,000.

For carrots, 8,000 in 1923; 71,000 in 1957. From the chart you can see Reclamation States produced over 75 percent of the total, but all of the winter and all of the spring, all of the early summer, and all of the late fall carrots come from irrigated lands of the West. In 1918 it took only 24,000 acres to provide us with all the asparagus we needed, but by 1957 it required 155,000 acres.

Now, these were some of the protective foods that the Commissioner identified that were still in short supply, and indicated that there is a potential demand yet to be met.

LETTUCE ACREAGE

Let us take another crop. In 1918 it took only 15,840 acres of commercially planted lettuce to take care of our requirements. But in 1957 it was up to 233,310 acres. And going again to the chart, of the total lettuce, you see, reclamation State production is way over into the high eighties or low nineties. In terms of the seasonal production, when you get down to late fall and early spring it is almost 100-percent irrigation production in the 17 Western States. The per capita demand for some crops has gone down. Not so in the case of the crops listed on this chart.

One other item to which the Commissioner paid only passing attention is one that we are considerably concerned about, the tremendous increase in the requirement for water. On the next two charts titled, "Estimated Total Water Use in the United States" and "Estimated Ground Water Use in the United States," some very important relationships are presented. These charts produced by the Department of Commerce, show projections of total water requirements compared with the total population. Note that water use is expected to more than double in the period between 1950 and 1975. This is a much more rapid rate of increase than is expected in the case of population.

In terms of where are we going to get the water we think we are going to need? This wavy line on the graph here indicates that by far the most productive water source is our surface water, the rest of it is from all other sources.

So you can see the requirement on all of the agencies of Government, State, county, local, Federal, is to take better care of our limited water resources.

(The charts referred to follow:)

CHART 8

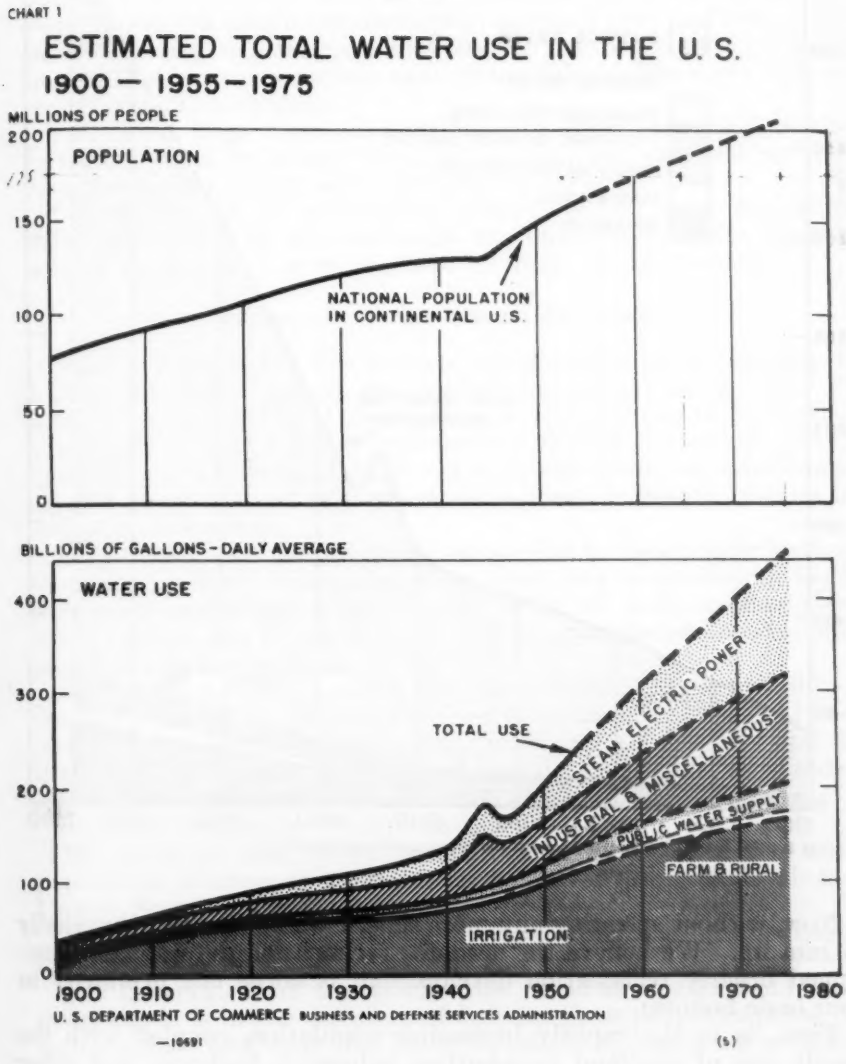
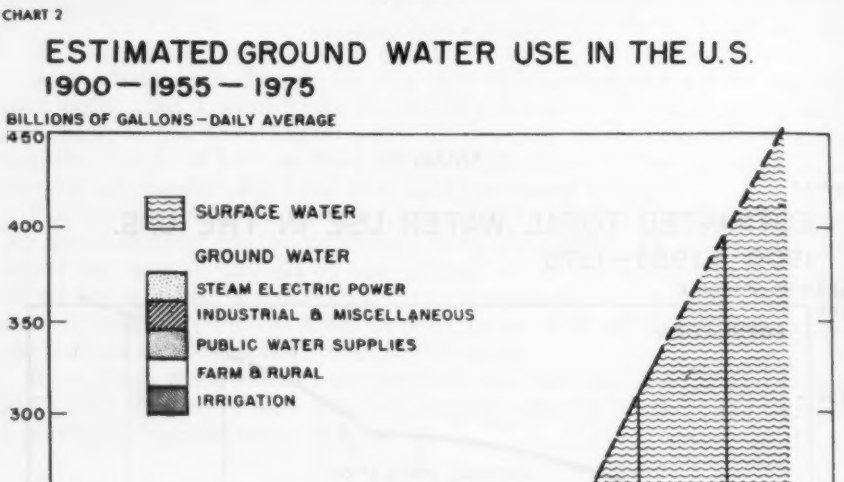


CHART 1
ESTIMATED TOTAL WATER USE IN THE U. S.
1900 — 1955 — 1975
MILLIONS OF PEOPLE
200
150
100
50
0
POPULATION
NATIONAL POPULATION IN CONTINENTAL U.S.
BILLIONS OF GALLONS - DAILY AVERAGE
400
300
200
100
0
WATER USE
TOTAL USE
STEAM ELECTRIC POWER
INDUSTRIAL & MISCELLANEOUS
PUBLIC WATER SUPPLY
FARM & RURAL
IRRIGATION
1900 1910 1920 1930 1940 1950 1960 1970 1980
U. S. DEPARTMENT OF COMMERCE BUSINESS AND DEFENSE SERVICES ADMINISTRATION
—10691
(5)

CHART 9



Now, without spending any more time, I would like very hurriedly to sum up. We believe the need for reclamation development, continued orderly reclamation development, is borne out primarily in four basic factors:

First, is in the rapidly increasing population, coupled with the steady loss of cropland to suburban industrial, highway, and other uses; second, the continued high and improved living standard—our dietitians indicate we need more of the protective foods—fresh vegetables, fruits, meats, and dairy products for a better and higher living standard; third, staggering increases in the water requirements, as can be seen from these charts; and fourth, the leadtime required, the time that we have to have between planning of the project, its author-

ization, and its construction, to get it into full production and achieve the full potential of the resources.

Thank you.

HOOVER DAM

Mr. DOMINY. I would like to say just one more word, Mr. Chairman. I know that in all your years of working with reclamation budgets that you recall well, and I am sure Senator Dworshak does, some responsible people opposed construction of Hoover Dam as being an unnecessary expenditure, they stated that we couldn't possibly market that power or utilize that water fully. The same was said about Grand Coulee Dam.

Yet, those huge reservoir developments have been used to their maximum capacity almost from completion, and are still serving a very fine economic purpose in our national economy.

I think that all the reclamation projects in this year's budget and those that would be planned from the money sought for planning will, if constructed, serve the best interests of the country.

PRODUCTION OF RAW COMMODITIES ABROAD

Senator DWORSHAK. There is one aspect of this whole problem that I think you have ignored, and probably it should be ignored. But you realize that when it comes to raw commodities or minerals or almost anything that you might consider, during the past 25 years we have expended billions of dollars in countries abroad to stimulate and expand production of raw commodities, beef in South America and cotton in some areas.

Do you consider the possibility of our aid to these underdeveloped countries reaching that point where they may be producing beyond their own requirements and placing a lot of their commodities in world competition so that then we will be an underdeveloped country, possibly, and they will take care of us?

Mr. DOMINY. Well, I think, Senator Dworshak, that probably for the first time in the history of the world we have the technical know-how and the mechanical means of producing all the food and fiber that would be required to house and feed the world at living standards comparable with our own.

Senator DWORSHAK. That is the difficulty——

Mr. DOMINY. But, unfortunately, the great bulk of the world's population is living at standards far below the minimum levels in the United States.

Senator DWORSHAK. And on our wage levels, that makes competition with their production very difficult.

Mr. DOMINY. That is certainly true. And as I understand our aid program, it is in the direction of helping these people improve their own economy and their own living standards by improved production and better utilization of their own resources.

I certainly believe, as an economist, that this is a very worthwhile objective, and that it will not harm us in terms of our own economy, but will give us greater assurance that we can maintain our own high plateau of living standards if we can assist others to reach a little bit up the ladder toward attainment of like standards.

Chairman HAYDEN. By that, you mean it is to our advantage to improve the standard of living of other countries.

Mr. DOMINY. Yes, sir. If we study trade with other countries, it will be perfectly apparent that the countries we trade with most are the countries that have an economy more nearly like our own, because they have money with which to buy, and they have an economy that uses the products of agriculture and industry.

These other countries that haven't developed their economy, they have no market, they are not a potential market. They will be if they can ever build their economy.

Senator DWORSHAK. You know what happened last year when Australia shipped carloads of live lambs and boned mutton and seriously depressed prices for those commodities in this country.

Mr. DOMINY. Well, certainly. We have to anticipate, if we are going to trade, that we buy from others as well.

Now, I certainly recognize that we in the United States are not in the market for wheat or cotton or beef——

Senator DWORSHAK. Nobody else is either, we give it away.

Mr. DOMINY. Yes, that is part of the problem, on certain commodities there are these imbalances.

Chairman HAYDEN. Senator Dworshak.

COLUMBIA BASIN LAND DEVELOPMENT

Senator DWORSHAK. Mr. Chairman, I want to take a minute to discuss with the Commissioner the development of lands in the Columbia Basin.

I have watched that for the past 15 years, since the end of World War II, and I recall when the original program was submitted to the Congress. Has there been any acceleration or retardation, or what is the status of the development of the irrigation in the basin? As I recall, you envisioned an overall development of about a million acres. What is the current status of that? Can you very briefly tell us?

Mr. DOMINY. Yes. You are quite right, Senator Dworshak. We started out with a project aiming for 1,029,000 acres. As of this year we are capable of delivering water—we have completed irrigation facilities that are capable of delivering water to approximately 400,000 acres.

Senator DWORSHAK. Is that on the original schedule?

Mr. DOMINY. That is approximately on the original schedule. Some people thought we ought to try to shoot for 50,000 or 60,000 acres of new land a year, and we did start with that idea in mind. But we soon recognized that that was just too much land to be assimilated by county governments and roads and schools and processing plants and all the other things that have to go with this tremendous economic upheaval.

So we have been bringing it in more in the light of 22,000 to 25,000 acres a year, and we believe that is about the proper rate within one given area.

Senator DWORSHAK. It would take more years to get the development, but you are doing it in a manner that is commensurate with the requirements for new production?

The rate of development must permit working this new irrigation economy into an existing economy without too much disruption on tax structures, roads, schools, processing plants, and all the things that go with moving large numbers of new people into a fairly sparsely settled area.

REPAYMENT NEGOTIATIONS

Senator DWORSHAK. What is the current status of the negotiations to increase the original repayment which was set by Secretary Ickes, I think, in 1945?

Mr. DOMINY. Well, that is a little difficult to answer. We have been in negotiation for 6 years. Now, this is a long time. It is not unusual in considering amendments to a contract where we find that the terms have to be adjusted—not all of which are in favor of the recipient of the project benefits—but where some of the payments need to be raised a little bit, that it takes quite a little negotiation.

As the chairman will recall, we had quite a long series of meetings on the Gila project before we finally got the revised contract approved. And this is what is happening on the Columbia River Basin. The terms which we have offered to them in the amended contract, in our judgment, are completely in accord with reclamation law and administrative practice which Congress has endorsed repeatedly, but the farmers believe these terms are a little too high, and they are hopeful that they can get terms more in line with their wishes.

PROPOSED REPAYMENT FIGURE

Senator DWORSHAK. What is your proposed repayment figure now?

Mr. DOMINY. We have proposed to adjust the contract—and this may be a good place to have this in the record, if you would like to have it—we have proposed to take the existing contract, which would require the farmers to pay $85 an acre over a 40-year period, plus $36 an acre of drainage which the present contract currently requires them to pay as operation and maintenance, making a total of $121 an acre over a 40-year period. However, this means relatively high payments in the early years because drains will be required in the early years. We have offered them a contract which would raise the $121 to a total of $133.50, for total construction repayment over a 50-year period instead of a 40-year period, and capitalize all of the drainage expenses so that none of it would have to be paid as operation and maintenance in these early years when the farmer has the least ability to pay. In the early years he has all of his expenses of subjugating his farm and his interest payments on high capital investment loans, and that sort of thing.

And also we have offered to reduce the construction installment in the early years of repayment down to $1.50, as compared to the requirement under the present contract of $2.12 on the average. But because we are asking for a greater total return, they have opposed it, and have wanted to keep the figure at $85, and have wanted the drains capitalized without increasing the $85, and they have also asked for some help from the power revenues to pump the water from Franklin D. Roosevelt Lake into the equalizing reservoir.

We think those terms are a little more liberal than we could justify in the light of current contract terms on other reclamation projects.

Senator DWORSHAK. Why are you cutting the construction repayment to $1.50 from what it was, $2.12?

Mr. DOMINY. We would cut it in the early years for the first 5 years following the development period, recognizing that that is the time when the farmer has the least ability to pay—when he is first getting his farm underway; and then we would raise it to $1.80 for the second 5 years after the development period, and then to $2.10; and then to $2.40; and finally, a maximum of $3.30 an acre.

Now as to the status of the negotiations: I met with the people on the project in open meetings in February, and explained why I was not prepared to recommend terms more liberal than these I have just reported to you. They elected to try to get terms more liberal, and have asked the Congress to consider legislation which would in effect approve a contract along the lines that the farmers on the project have recommended.

Meanwhile, in order to be relieved of the requirement to pay the $1.65 drainage assessment which was levied under the terms of the present contract, they asked that a moratorium be provided. The Senate has approved that moratorium, and the House did not take action prior to May 1, when the payment was due, and the three districts have paid the obligation out of reserve funds.

So I was not confronted with the requirement under the law to shut off the water, because they did meet the payment. They met it by a process of placing their collateral in escrow, but it is a legal means of accomplishing it, because the funds are in escrow with a bank, and if the Congress doesn't give them a moratorium before adjournment of the present session, the payment will be made at that time, with interest.

Senator DWORSHAK. I have been watching these developments, and I am cognizant of the criticism that has been directed toward Federal reclamation development for various reasons, particularly when we have crop surpluses. But it would seem to me that if we had a sense of equity and cooperation on the part of the leaders in reclamation such as in the Grand Coulee Basin, with the long-range objective of trying to cooperate and not subject the entire program to criticism from areas where they do not have reclamation, we wouldn't be under this constant cloud of stigma and criticism that we face.

Do you agree with me on that?

Mr. DOMINY. I do, indeed, agree with that, Senator Dworshak. The principle of reclamation paying its way with every dollar appropriated to be returned to the Treasury, either from the irrigation or from power revenues or municipal or industrial water revenues, is well grounded, and it is this principle that has permitted the rest of the country to support the 17-State western reclamation program.

Senator DWORSHAK. And if these reclamation programs are feasible and justified—the investments being made by the Federal Treasury—then there ought to be an awareness of the need of cooperating on the part of the beneficiaries involved, so that we can proceed then in an orderly manner instead of constantly facing requests for a moratorium, or some other letting down or modification of the original program.

I realize in this case that the original obligation was placed as $85. But we have had an inflation which has doubled the expenses of the Federal Government in reclamation, and unless we can get a fair measure of cooperation, we will accentuate and expect more criticism than we have had.

PROJECT CONSTRUCTION ESTIMATE

Mr. DOMINY. That is exactly right. On this project, for instance, the estimate that we had for project construction at the time the 1945 contracts were signed was $342 million irrigation investment.

Senator DWORSHAK. What is it now?

Mr. DOMINY. We now think it is going to cost in excess of $765 million to provide that irrigation.

Senator DWORSHAK. Almost three times as much.

Mr. DOMINY. Roughly, 2¼ times as much, yes, sir.

If you like, I think this statement which relates the terms of the existing contract to the terms I have offered to recommend and the terms the basin farmers have requested, could be in the record on this point.

Chairman HAYDEN. That statement will be included in the record.

Summary of Columbia Basin contract terms (assuming full development of million-acre project)

Principal items	1945 contracts				Bureau of Reclamation proposal				Requested by water users
Construction and drainage payment schedule	Dollars per acre (average):				Dollars per acre (average):				$85 average over 40 years; $2.125 average per year. Specific payment schedule not established except minimum of $1.50 average per year in early years.
	Year	Annual		Cumulative	Year	Annual		Cumulative	
		Construction	Drainage (estimate)			Construction	Drainage		
	1 to 5	$2.125	$2.50	$23.13	1 to 5	$1.50	$0	$7.50	
	6 to 10	2.125	2.50	46.25	6 to 10	1.80	0	16.50	
	11 to 15	2.125	2.20	67.88	11 to 15	2.10	0	27.00	
	16 to 20	2.125	0	78.50	16 to 20	2.40	0	39.00	
	21 to 25	2.125	0	89.13	21 to 25	2.70	0	52.50	
	26 to 30	2.125	0	99.75	26 to 30	3.00	0	67.50	
	31 to 40	2.125	0	121.00	31 to 40	3.30	0	100.50	
					41 to 50	3.30	0	133.50	
	40 years	85.00	36.00	121.00	50 years	133.50	0	133.50	
Construction expenditure limitation	$280,782,180				No dollar ceiling				No dollar ceiling.
Drainage expenditure limitation	$8,176,000 ceiling on construction of drainage works. Costs above ceiling charged yearly as O. & M.				No dollar ceiling. All drainage construction costs to be capitalized as project cost.				No dollar ceiling. All drainage construction costs to be capitalized as project cost.
Power cost	0.5 mill per kilowatt-hour (may go up if rate does not cover cost of related O.M. & R.).				Same as 1945 contracts				Cost of primary pumping energy absorbed by Coulee power revenues.
Variable repayment	Ratio of current year's returns to average of best 10 of past 13 years.				(1) Ratio of current year's returns to average of past 10 years adjusted by parity; or (2) other mutually acceptable plan.				Not specified—on assumption agreement can be reached readily.
Operation and maintenance	By United States unless otherwise provided by supplemental agreement.				Permits transfer to water users				Not specified but assume Bureau of Reclamation provision on transfer would be agreeable.
Reserve fund for O. & M	Accumulation equal to average of past 5 years' annual O. & M. costs.				Accumulation equal to ¼ of average of past 5 years' annual O. & M. costs.				Not specified, but believe districts recognize need and would agree to reasonable proposal.
Water for high arable lands	No provision				At request of landowners on same terms applicable to other project lands of similar quality.				Not specified, but believe districts and Bureau of Reclamation are in agreement.
Irrigation repayment assistance from power revenues.	$254,464,994 (1945 estimate)				$628,000,000 (current estimate)				Construction—$678,000,000 (estimate) O. & M.—primary pumping energy at Coulee Dam; estimated at $775,000 per year, or $31,000,000 in 40 years.

Recreational Facilities on Bureau Projects

Chairman Hayden. I would like to take a minute to discuss with the Commissioner the statutory authority for the construction of recreational facilities at reservoirs under the jurisdiction of the Bureau of Reclamation. Before you comment, I would like to have included in the record a list of those projects where you have authority to construct recreational facilities on a nonreimbursable basis.

(The list referred to follows:)

Nonreimbursable Recreational-Development Authorizations

The following list has been prepared to show nonreimbursable recreational-development authorizations. This list includes facilities constructed and under construction, as well as those on which construction has not yet been started.

Region	Project	Authorization			Estimated total
		Public Law	Congress	Session	
1	Columbia Basin	641	84th	2d	$174,560
	Crooked River	992	84th	2d	16,000
	Little Wood River	993	84th	2d	30,700
	Palisades	864	81st		148,000
	Rogue River Basin, Talent division	606	83d	2d	140,000
	Vale, Bully Creek extension	248	86th	1st	60,000
	Wapinitia	559	84th	2d	34,870
2	Central Valley, Trinity River division	386	84th	1st	250,000
	Solano	863	85th	2d	125,000
	Ventura River	423	84th	2d	100,000
3	None				
4	Colorado River storage:				
	Curecanti	485	84th	2d	3,268,450
	Flaming Gorge	485	84th	2d	3,109,000
	Glen Canyon	485	84th	2d	9,241,000
	Navajo	485	84th	2d	834,000
	Paonia	485	84th	2d	7,500
	Florida	485	84th	2d	52,000
	Seedskadee	485	84th	2d	185,300
	Smith Fork	485	84th	2d	29,000
	Vernal	485	84th	2d	93,000
	Washoe	858	84th	2d	58,000
	Weber Basin	273	81st		4,738,000
5	Carlsbad [1]				8,367
	San Angelo	152	85th	1st	68,000
	Washita Basin	419	84th	2d	549,000
6	Missouri River Basin, Garrison division, Jamestown unit.				85,718
7	Missouri River Basin:				
	Frenchman-Cambridge division, Red Willow Reservoir.	505	84th	2d	43,000
	Sandhills Division, Ainsworth unit	612	83d	2d	14,800

[1] Constructed by CCC.

Minimum Basic Recreational Facilities

Chairman Hayden. Would you please comment on this matter, Mr. Commissioner.

Mr. Dominy. Only in certain specified cases has the Congress authorized the Bureau of Reclamation to provide recreational facilities as a nonreimbursable function. On all of our regularly authorized projects, Chairman Hayden, we have the authority from Congress to provide minimum basic recreational facilities. But the cost of these go in as a reimbursable project cost. And they are paid by the water users or the power users or the municipal industrial water users just the same as any other project cost.

Senator Dworshak. Are you sure of that?

Mr. DOMINY. Yes, except for——

Senator DWORSHAK. How about the Cheney Dam?

Mr. DOMINY. I say, except for specially authorized projects. We have on some of the more recently authorized projects some nonreimbursable recreational provisions. We have on the Colorado storage projects some nonreimbursable recreational provisions. And we are requesting it on some of the projects now before Congress.

Senator DWORSHAK. Did you determine when the amount should be repayable and when it shouldn't?

Mr. DOMINY. Well, I think it is basically one of those things——

Senator DWORSHAK. Is it a political question?

Mr. DOMINY. No, sir. I think it just one of those things that has come about through the process of evolution. In all of our old projects we didn't have that sort of thing.

Chairman HAYDEN. Well, they didn't think about the situation as it exists today.

Mr. DOMINY. You are exactly right.

Chairman HAYDEN. You go out to Arizona, and you would be surprised at the number of people that have boats on trailers going up to the lakes and the Colorado River and other places where there are storage facilities that provide recreational activity. The selling of recreation equipment has become a major business. Of course, where there are recreational facilities, you are going to have a greater market for things of that kind, which will add to the industrial prosperity of the country by their manufacture.

Mr. DOMINY. Well, it is just amazing to all of us to realize how much use these recreational facilities get.

I would like to file this statement on recreational use in the record, but I would like to summarize just one or two things.

(The statement referred to follows:)

TOPIC: RECREATION USAGE OF RECLAMATION PROJECTS

Synopsis.—Public use of the water surface and shorelands of reclamation reservoirs provides important recreational benefits. In 1959 recreational use totaled some 22.72 million visitor days on the 174 reservoirs and other public use areas. This represents an increase of about 17 percent over 1958 and 139 percent over 1955. Distribution of the 22.72 million visitor days, by activities, was as follows:

	Million		*Million*
Sightseeing	8.61	Swimming	1.58
Fishing	4.80	Camping	1.06
Boating and waterskiing	3.44	Hunting	.35
Picnicking	2.74	Miscellaneous	.14

Federal reclamation law does not contain general authority for achievement of the full recreational potential created by the construction of water resource development projects. Since the principal purpose of the Bureau of Reclamation is the development and use of water and land resources for irrigation, basic authority is oriented to this and related multiple use functions. For this reason recreational or public use facilities have not been constructed on many of the existing reclamation projects. Primary project beneficiaries, who repay the cost of the project, are usually unwilling or unable and normally should not be expected to underwrite the costs of recreational or public use facilities. This situation, plus the absence of basic authority for nonreimbursable Federal funds to construct needed basic recreational facilities, results in undesirable situations at many reservoir areas where the demand for recreational use is large and public use facilities are nonexistent or extremely inadequate.

It is a long established Bureau practice to transfer the administration of recreational areas to suitable public agencies. Areas which are determined

to be needed for fish and wildlife purposes, in accordance with the Fish and Wildlife Coordination Act, as amended, are made available for administration by the U.S. Fish and Wildlife Service or the State agency responsible for fish and wildlife. Recreational areas determined to be of national significance are transferred to the National Park Service for administration and development. Areas wholly or substantially within national forests are transferred to the U.S. Forest Service, and areas of less than national significance and outside national forests are made available to State or local governmental agencies including irrigation districts, for administration and development of recreational resources. Of the 174 reservoirs and other public use areas on existing reclamation projects, 139 had been transferred to other organizations for public use administration by the end of calendar year 1959. The lack of basic public use facilities at a number of these installations causes many responsible State or local government organizations to be reluctant to assume recreational administration of the areas.

There is need for a policy on cost sharing which would define recreational benefits and allow recreation to bear its share of the costs of joint project works, and which would provide for Federal participation where local or State agencies cannot assume full financial responsibility.

The Bureau of Reclamation, along with other public land management agencies, is cooperating with the Outdoor Recreational Resources Review Commission in attempting to find answers to the many problems encountered in the administration of reclamation projects for maximum benefit.

TOTAL VISITORS

Mr. DOMINY. In 1959 recreational use totaled some 22.7 million visited days on 174 reservoirs and other public-use areas. Now, this represents an increase of about 17 percent over 1958 and 139 percent over 1955. Facilities like Hoover Dam attract more visitors than most of our national parks. And these visitors have to be taken care of—they just have to have sanitation facilities and boat ramps and picnic areas, and so on.

Senator DWORSHAK. Then, Mr. Dominy, why should there be a requirement on our projects that benefits derived from recreation should be repayable or reimbursable to the Government as we develop our forests—and our forests into recreational areas, and our national parks in most cases, and there is no reimbursement?

Mr. DOMINY. We have no authority under reclamation law except in a few special projects by authorization to do anything but charge the recreational costs to the project if we provide any recreational facilities.

Senator DWORSHAK. Do you think you would be justified or Congress is justified in having a basic discrimination whereby some recreational developments on projects should be repayable to the Government, while in other areas large sums can be charged off without any reimbursability for recreation?

Mr. DOMINY. I am a firm believer in consistency in procedures.

Senator DWORSHAK. We haven't much in the last few years?

Mr. DOMINY. I don't think we have.

Senator DWORSHAK. I am not criticizing you when I say that.

Mr. DOMINY. I understand that, Senator Dworshak. I think it is time to take stock of the public use, which is growing tremendously, of all recreational facilities, and that there ought to be a little greater standardization of Federal participation as among the various features supplied by the Federal taxpayer through these projects.

Senator DWORSHAK. If it is a general investment, then the Government is justified in requiring no reimbursability, but on the other hand, if you do require repayments in some cases and in others not,

we are establishing a precedent which is not defensible.

Mr. DOMINY. That is exactly my point.

GENERAL INVESTIGATIONS

Chairman HAYDEN. We will now proceed with the individual appropriation requests.

The budget estimate for "General investigations" is $4,650,000.

The justifications will be included in the record.

(The justifications follow:)

GENERAL INVESTIGATIONS

Summarized financial data

Fiscal year 1960:	
Appropriation, fiscal year 1960	$4,668,992
Prior year balance available	[1] 277,834
Balance available in subsequent years	−12,435
Contributions	186,330
Total obligations, fiscal year 1960	5,120,721
Fiscal year 1961:	
Estimate of appropriations, fiscal year 1961	4,650,000
Prior year balance available	12,435
Balance available in subsequent years	−12,435
Contributions	103,987
Total obligations, fiscal year 1961	4,753,987

[1] Does not include prior year balances of advances to Assistant Commissioner and Chief Engineer's Office, Denver, Colo., and centralized project activities in regional offices.

JUSTIFICATION

The appropriation for general investigations provides for the planning of the basin and project developments of the Bureau of Reclamation for the utilization of the water resources of the 17 Western States, except in the Missouri River Basin where investigations of potential developments have been made with construction and rehabilitation allotments. This fund also provides for investigations in Alaska and Hawaii.

In the past, the Bureau of Reclamation program of general investigations has included:

(1) Engineering and economic investigations to determine the feasibility of potential reclamation projects;

(2) Advance planning to prepare newly authorized projects for construction;

(3) Investigations of existing projects necessary for rehabilitation, financial adjustments, or water conservation; and

(4) Investigations in Alaska relating to development of water resources.

Beginning in fiscal year 1961 the advance planning on authorized projects awaiting appropriation of funds for start of construction will be financed from the construction and rehabilitation appropriation.

The general investigations program includes allowances for necessary transfers of funds for reimbursements to other agencies, such as the Geological Survey, National Park Service, Weather Bureau, Coast and Geodetic Survey, Department of Agriculture, etc., for work over and above their regular programs which those agencies perform in connection with the Bureau's program because they are better equipped to do that specialized work. These amounts are included in the programs for the individual items. In the past, the transfers to the Fish and Wildlife Service were handled in a similar manner. The appropriation for the general investigation activity provided by the 1960 Public Works Appropriation Act, however, includes a specific amount for transfer to that agency for river basin studies and studies relating to the Bureau's projects under investigation, authorized and awaiting construction funds, or under construction. The funds for transfer to the Fish and Wildlife Service are therefore programed as a separate item beginning with this budget submission.

Work underway and proposed

The general investigations program for the current fiscal year is $5,120,721 which is financed with appropriated funds in the amount of $4,934,391 and contributions of $186,330. With these funds, planning activities will be underway on a total of 107 investigations, exclusive of stream gaging activities only. Of this total, 89 will be studies underway at the beginning of the fiscal year and 18 will be investigations being initiated or resumed. Thirty-seven of these investigations will be completed.

The estimated appropriation of $4,650,000 for general investigations for fiscal year 1961 includes $500,000 from the Colorado River Development Fund, for investigations in the Colorado River Basin as authorized by the Boulder Canyon Adjustment Act of 1940, to be provided annually from the revenues of the Boulder Canyon project as a special fund for the development of projects in the Colorado River Basin; $700,000 from the general fund of the Treasury for the Alaskan investigation program ($250,000), the initiation of a nonreimbursable engineering methods and materials research program ($250,000), and transfer to the Fish and Wildlife Service ($200,000); and $3,450,000 from the reclamation fund.

The request of $4,650,000 for fiscal year 1961 plus contributions in the amount of $13,987 will be utilized for planning activities on a total of 89 investigations of which 70 will be continuations of prior year investigations and 19 will represent investigations initiated or resumed. Of the total, 26 will be completed in fiscal year 1961. The activity breakdown of work proposed in fiscal year 1961 compares with the program for fiscal year 1960 as shown in the following "Summary by Activities," and the details of the program proposed is presented in the accompanying tabulation entitled "Schedule of General Investigations Program, Fiscal Years 1960 and 1961."

Summary by activities

Activity	Estimated total	Total to June 30, 1959	Program, fiscal year 1960	Program, fiscal year 1961	Balance to complete
Engineering and economic investigations	$80,688,323	$30,934,903	$4,708,018	$4,367,447	$40,677,955
Advance planning	2,681,867	2,498,262	183,605		
Investigation of existing projects	262,108	168,493	40,492	39,000	14,123
Alaskan investigations	3,460,224	789,256	252,877	250,000	2,168,091
Subtotal Bureau of Reclamation	87,092,522	34,390,914	5,184,992	4,656,447	42,860,169
Transfer to Fish and Wildlife Service	4,395,000		195,000	200,000	4,000,000
Total, general investigations	91,487,522	34,390,914	5,379,992	4,856,447	46,860,169
Distributive charges for service facilities, unliquidated obligations, etc.			−259,271	−102,460	
Total obligation program			5,120,721	4,753,987	
Less unobligated carryover and funds advanced			[1]−451,729	−103,987	
Appropriation or estimate			4,668,992	4,650,000	

[1] Does not include prior year balance of advances to Commissioner's Office, Denver, Colo., and centralized project activities in the regional offices.

Engineering and economic investigations—Detail by subactivity

Subactivity	Estimated total	Total to June 30, 1959	Program fiscal year 1960	Program fiscal year 1961	Balance to complete
Reconnaissance	$3,282,000	$250,761	$358,629	$448,987	$2,223,623
Basin surveys	12,849,668	9,105,014	491,181	290,920	2,962,553
Project investigations	60,640,947	20,130,872	3,739,038	3,274,540	33,496,497
General engineering and research:					
Planning studies	2,240,708	1,448,256	119,170	103,000	570,282
Engineering methods and materials research	1,675,000			250,000	1,425,000
Total	80,688,323	30,934,903	4,708,018	4,367,447	40,677,955

Reconnaissance

The program for fiscal year 1960 for this activity is $358,629. This program will provide for the continuation of reconnaissance survey work on seven potential projects to develop preliminary plans and ascertain the advisability of making more detailed feasibility studies and the initiation of reconnaissance studies on six additional projects. Of these, one study is to be completed.

Major items of work will be the continuation of the reconnaissance surveys of the Amador County Basins in California and the initiation of similar studies on the Lower Horse Heaven project in Washington, the Snake Plains recharge project in Idaho and the Prairie Dog Town and Salt Forks of the Red River in Texas.

The fiscal year 1961 program will be $448,987. This will provide for further work on the 12 studies underway but not completed in the prior year and initiation of 5 additional studies. Of these, 8 will be completed.

The increase of the fiscal year 1961 program over the fiscal year 1960 program is primarily due to the initiation of reconnaissance investigations on three rather large potential developments, namely, the Eel River diversion unit of the Central Valley project in California; the Lower Colorado River water salvage project in Arizona, Nevada, and California; and the Oklahoma Basins project in Oklahoma.

This is a relatively small but very important segment of the general investigation program. Through these reconnaissance surveys it is possible to evaluate potential projects with a minimum of time and funds to determine whether more detailed investigations are warranted.

Basin surveys

The fiscal year 1960 program for this activity is $491,181, and the estimated program for fiscal year 1961 is $290,920. The fiscal year 1960 program will provide for continuation of comprehensive planning already underway in nine basins and the initiation of similar work in two other basins. In addition, the program will provide for the incurring of a small amount of cost against the Lahontan and Bonneville Basins to cover Federal representation on the water compact negotiations.

This will involve the continuation of comprehensive planning on the Columbia River, Central Valley, Lower Colorado River, Rio Grande, Upper Colorado River, and the Upper and Middle Snake Basins. Similar studies will be completed in the Kootenai, Lower Klamath, and Pecos River Basins and initiated on the Chehalis and Pend Oreille River Basins. In fiscal year 1961 work will be underway on eight basin surveys not completed in the prior year and a small amount of funds is programed for the Lahontan and Bonneville Basins. The decrease in the program for this activity is due to the completion of the three rather substantial basin surveys in fiscal year 1960.

These basin surveys are made to establish comprehensive plans for each basin to insure optimum development of the land and water resources. Completion of these overall plans for the major drainage basins in the West should be carried forward expeditiously to establish the framework for more detailed feasibility studies.

Project investigations

The fiscal year 1960 program for this activity is $3,739,038. This program will provide for the continuation of planning on 56 investigations underway at the beginning of the fiscal year, and the initiation or resumption of planning on 7 other studies. Of these, 23 will be completed by the end of the fiscal year.

The program for fiscal year 1961 is $3,274,540. The program will provide for the continuation of planning on 40 investigations underway at the beginning of the fiscal year and the initiation of planning on 4 other studies. Of these, 15 are to be completed at the end of the fiscal year.

The project investigation activity is the most important element in the entire general investigation program as it is these studies that culminate in final plans which serve as a basis for recommendations to Congress for authorization of water resources developments to meet the needs of the expanding population of the United States. That population is increasing now by approximately 3 million persons per year. The Department of Commerce median projection indicates a population of 370 million by 2010. Thus, in 50 years, the population will about double. The growth of the West is proceeding even more rapidly than that of the country as a whole. Between 1950 and 1957 the population of the 17 reclamation States grew at the rate of 2.7 percent compounded each year—almost twice the rate of growth of the 31 Eastern States

in the same period. It is estimated the population of that part of the Nation will have grown 50 percent—from 41 to 60 million people—by 1975. By 2010 the total population of this area will be 130 million if that growth trend continues. At the same time many thousands of acres of some of the best agricultural land in the Nation are being taken out of production each year for urban and industrial expansion, airports, highways, and other nonagricultural uses. Erosion, alkalinity, waterlogging, etc., also are impairing or taking out of production large blocks of land each year.

The rapidly increasing population of the Nation coupled with the taking of large blocks of land out of production each year will create a pressing demand for food and fiber to maintain even the current standard of living. This demand can be met only by shifts in agricultural cropping pattern to concentrate on the more productive crops, increasing the per acre production through improved farming practices and techniques, or by bringing additional land into cultivation. Studies indicate that the first two factors, concentrating on more productive crops and increasing the crop production per acre, will fall far short of meeting the requirements of this expanding population.

Along with this population growth there will no doubt be a continuation of the rapidly increasing demands of cities for a greater share of the limited water resources; in fact many cities are already feeling the effects of an inadequate water supply which is hindering further development. Studies by the Department of Commerce indicate that by 1975, the use of water for all purposes other than irrigation is expected to rise over 60 percent from the 1958 level of about 172 billion gallons per day to 280 billion gallons per day in 1975.

It is readily apparent that if the Nation's economy is to continue to grow as it has in the past, careful conservation and utilization of the limited land and water resources will be essential and energetic efforts will be required to expand our agricultural production through all possible means including the development of additional irrigation projects. Because of the long-time lag between initiation of an investigation and the bringing of land into production it is essential that the planning work be carried forward at an effective rate now. If the Bureau, as the Federal agency primarily responsible for water conservation and utilization developments in the West, is to carry out its responsibilities in meeting this challenge of tomorrow, its planning program must be geared to long-range goals. It must be reviewed not from the standpoint of current needs and conditions, but in light of conditions expected to prevail a few years in the future.

General engineering and research

Planning studies.—The fiscal year 1960 program for this activity is $119,170, and the estimate for fiscal year 1961 is $103,000. The easily developed reclamation projects have long since been completed, largely by private capital. The remaining projects generally represent large complex undertakings which require several years of intensive and careful planning to insure a successful development and the fullest use of the available water. In a number of the technical fields involved in water resources planning this requirement places a severe strain on the limited amount of basic technical data now available. This is particularly true in the fields of hydrology and sedimentation. The basic objective of this general engineering and research program, which is nonreimbursable, is the collection of basic data and the development of technical procedures and methods to assist in the hydrologic, economic and related engineering planning phases of a reclamation development. All of these studies are of a general nature and do not relate to specific projects. Private industry has long since recognized the necessity for sound research programs to develop new procedures and products. Quite similarly, this general engineering and research program should return substantial dividends in the form of savings in time and funds in the planning and construction of future projects.

Engineering methods and materials research.—The fiscal year 1961 appropriation request for the general investigation activity includes $250,000 for an engineering methods and materials research program. The objective of this research program is the investigation of new techniques and methods for construction of reclamation projects, including studies of new materials and products and their application to reclamation work, with the objective of bringing about savings in construction costs. In the past, the cost of this research program has been charged to projects under construction. The work, however, is of a general nature not identifiable with specific projects and the results are of benefit not only to those projects now under construction but those already in operation and

those that will be developed in the future. Moreover, the results of these studies are made available to and are widely used by State and other Federal agencies, private organizations and other nations. In order to correct the inequity resulting from the charging of the cost of this research program to beneficiaries of projects currently under construction, $250,000 of nonreimbursable general investigation funds are requested for fiscal year 1961.

ADVANCE PLANNING

The fiscal year 1960 program for this activity is $183,065. Beginning in fiscal year 1961, however, this advance planning work will be financed from the construction and rehabilitation appropriation. A major portion of the fiscal year 1960 program will be utilized to continue the detailed preconstruction studies on the authorized initial phase of the Washoe project and the Trinidad project. The latter project is an authorized Corps of Engineers' project for which the Bureau has the responsibility of negotiating repayment arrangements for return of the costs allocated to irrigation. In addition, advance planning studies under the general investigations activity will be completed on the LaFeria division of the lower Rio Grande rehabilitation project utilizing funds contributed by the local interests, the Greater Wenatchee division of the Chief Joseph project, and the Canadian River project. Construction funds were appropriated for the Greater Wenatchee division for fiscal year 1960 but prior year general investigation funds programed for this project were utilized to continue the preconstruction studies until the construction allotments became available.

INVESTIGATIONS OF EXISTING PROJECTS

The program for fiscal year 1960 for this activity is $40,492. This program will provide for additional planning of three studies underway at the end of the prior year and the initiation of work on two additional studies. Of these, three will be completed by the end of the year.

The program of $39,000 for fiscal year 1961 will provide for further planning on the two studies underway but not completed in the prior year, and initiation of work on two additional studies. Of these, two will be completed.

Many of the structures on existing Bureau of Reclamation projects have been in operation for many years and have deteriorated to the point where the rehabilitation of the facilities as part of the normal operations and maintenance program is beyond the financial abilities of the water users. As part of this activity studies are being made to determine the need and justification for rehabilitation work on these older projects. This activity also provides for land reclassification studies required by terms of existing repayment contracts.

ALASKAN INVESTIGATIONS

During fiscal year 1960 this activity will be carried forward with a program of $252,877. This will be used to complete studies of the 450,000 kilowatt Devil Canyon project on the Susitna River which will serve the growing railbelt area and to continue an investigation of the 100,000 kilowatt Snettisham project which will serve the Juneau area where the key to mining and pulp manufacturing is the availability of a block of low-cost power. Limited cooperative studies will also be underway with the Alaska experiment station in connection with the Matanuska Valley project and a small amount of funds will be used for important stream gaging work to augment the sketchy streamflow data now available. The fiscal year 1961 program of $250,000 will be utilized to continue the Matanuska Valley and Snettisham project studies as well as the stream gaging work. It will also provide for the initiation of feasibility studies of the 200,000 kilowatt Chakachamna project located across Cook Inlet from the city of Anchorage and of the 260,000 kilowatt Vee project on Susitna River.

There are at the present time almost unlimited opportunities for low-cost hydroelectric power developments in Alaska. At the same time, Alaska's population has grown quite rapidly and with such population growth there are insufficient homes, schools, commercial establishments, public utility services, and service industries. Electric services are limited, and many dwellers in the suburban rural areas are unable to obtain electric service. Until substantial blocks of low-cost energy are made available, most of Alaska will suffer the inconvenience of relative curtailment in electric power supply. For the same reason, industrial expansion of Alaska is severely handicapped for need of

electrical energy. It is important the investigations be continued, since they will contribute materially toward permanent settlement, encourage industrial development, and accelerate use and aid in the development of other Alaskan natural resources.

TRANSFERS TO FISH AND WILDLIFE SERVICE

Summarized financial data

Fiscal year 1960, appropriation	$195,000
Total obligations	195,000
Fiscal year 1961, estimate of appropriation	200,000
Total obligations	200,000

The program of $200,000 for this activity is needed to permit detailed studies by the U.S. Fish and Wildlife Service of Bureau of Reclamation projects in the United States, exclusive of the Missouri River Basin, as required by the Fish and Wildlife Coordination Act, as amended in 1958 (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) Projects in both the general investigations and the construction and rehabilitation programs of the Bureau of Reclamation will be studied with funds appropriated under this item.

Under the Fish and Wildlife Coordination Act, the Fish and Wildlife Service is required to determine the effects on fish and wildlife resources of water-control projects of the Bureau of Reclamation and other Federal and non-Federal agencies under Federal license and to recommend measures for the protection, development, and improvement of these resources. The act authorizes the transfer of funds for these studies to the Fish and Wildlife Service from moneys appropriated to the Bureau of Reclamation and other Federal construction agencies for investigations, engineering, or construction.

Funds requested herein will be used by the Service in conducting detailed studied of Bureau of Reclamation projects not yet authorized, authorized projects on which construction work has not yet begun, and projects under construction which are not substantially completed. In these studies, the Service determines whether the net effects of each project will be beneficial or adverse. If detrimental effects are anticipated, the Service report on the project recommends specific measures for preventing or reducing losses to these resources. On the basis of these studies, the Service report also recommends specific measures for the development and improvement of fish and wildlife as an integral part of the project plan. Mutually acceptable fish and wildlife measures are then included in the project plan by the Bureau of Reclamation and the costs of these measures are included as an integral part of project costs in accordance with the provisions of the Coordination Act.

Recommended conservation measures include minimum releases from reservoirs to preserve or improve downstream fisheries; minimum pools in reservoirs to maintain reservoir fisheries; protective screening to prevent fish from entering turbine intakes and diversion canals; fish passage facilities; fish hatcheries to maintain or improve fisheries; selective reservoir clearing to aid fish and wildlife use; creation of subimpoundments within reservoirs for fish and wildlife management; and the acquisition and development of additional lands as wildlife management or refuge areas to maintain or improve wildlife habitat in the project area. The Service also recommends where appropriate that certain public lands and waters acquired for project use and deemed suitable for wildlife management purposes, be made available to State or Federal conservation agencies, subject to agreements mutually acceptable to the Secretary of the Interior and the head of the appropriate State conservation department.

The $200,000 requested herein will enable the U.S. Fish and Wildlife Service to conduct detailed studies of approximately 33 Bureau of Reclamation projects during fiscal year 1961.

Schedule of general investigations program, fiscal years 1960 and 1961

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS							
RECONNAISSANCE							
Region 1:							
Lower Horse Heaven project	Washington	$99,000		$37,354	$61,646		Reconnaissance investigation initiated in fiscal year 1960 to determine if the project area of about 127,000 acres along the Columbia River in south-central Washington merits further study. Data are also needed to help determine the total resource development of the area contiguous to the McNary Dam project. Study to be completed in fiscal year 1961.
Snake Plain recharge project	Idaho	180,000		76,624	50,000	$53,376	Reconnaissance initiated during fiscal year 1960 to determine possibilities of diverting surplus flows of the Snake River onto the plains in south-central Idaho north of the Snake River for storage and to recharge underground supplies. The project would provide irrigation water, flood control benefits, and downstream stabilization of flows of the Snake River. Reconnaissance study will be completed in fiscal year 1962.
Teton Basin project	do	170,000	$59,314	9,779	31,544	69,363	Preliminary studies of the feasibility of providing storage capacity in the upper Teton Basin area in southwestern Idaho have been made. The purpose of this investigation is to extend those earlier studies to determine, to reconnaissance standards, the feasibility of utilizing that regulation for supplemental water for some 57,800 acres suffering from chronic water shortages as well as for flood control. In addition there are some 54,200 acres of new land in the upper basin that could use any additional water supply that can be developed.
Yakima project, Ahtanum Creek division.	Washington	35,600	8,848	13,690	13,062		Project located in Yakima County near city of Yakima, Wash. Reconnaissance investigation started in fiscal year 1959 to determine possibilities of providing critically needed supplemental water to the Ahtanum Irrigation District. A suit presently before the courts to obtain a greater share of the water of Ahtanum Creek for the Indian reservation may further intensify the shortage for the district. Initiation of feasibility studies will depend upon the outcome of the recon-

							naissance study which will be completed in fiscal year 1961.
Other projects, region 1		820,000	3,865			816,135	Reconnaissance investigations to be initiated or resumed after fiscal year 1961.
Region 2:							
Amador County basins	California	115,500	24,005	30,555	49,367	11,573	This reconnaissance study would determine methods of providing a firm water supply for several subbasins formed by the tributaries of the Cosumnes and Mokelumne Rivers in Amador County southeast of Sacramento. These subbasins are adaptable to orchards, vineyards, and pasture. A firm water supply is needed for both agricultural and domestic use. The curtailment of gold production and reduction in income from forest products make necessary the development of alternative opportunities. After providing for local requirements the basin development would provide water supplies for use in east side service areas. Reconnaissance report is to be completed in fiscal year 1962.
Central Valley project, Placerville Ridge unit.	do	18,000			18,000		The unit is located in the western portion of El Dorado County between South Fork of American River and North Fork Consumnes River. Study will involve reconnaissance appraisal of available water supplies and cost of delivery. Economy of area is now dependent upon lumbering, mining, service industries and limited agriculture. Area is adaptable to growing of deciduous fruits, irrigated pasture, and hay. Additional water would contribute to stabilizing the economy of the area. Local interests are to contribute one-half of the cost of the investigation.
North coast project, Eel River diversion unit.	do	125,000			20,000	105,000	The north coastal area of California, which embraces only 8 percent of the area of the State, contributes 36 percent of the water supply. The basin survey now approaching completion indicates a substantial part of this supply is surplus to inbasin need and is available for export. The upper Eel River, where an estimated 1,500,000 acre-feet is available for export, will be one of the principal sources of water for future development in California. Local interests are desirous of seeing that development is accomplished to benefit the economy of northwestern California as well as the needs of the rest of the State. This investigation will refine the basin survey data, determine the most desirable plan of development for the Eel River Basin, and establish the amount of water available for transbasin development. A report is to be completed in fiscal year 1961.
Other projects, region 2		335,000				335,000	Reconnaissance investigations to be initiated or resumed after fiscal year 1961.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
RECONNAISSANCE—continued							
Region 3:							
Lower Colorado River Basin	Arizona, Nevada, New Mexico, and California.	$120,000	$61,132	$24,600	$28,868	$5,400	A reconnaissance report on alternate routes for delivery of water from Lake Mead to serve industrial, municipal, and homesite uses in the Eldorado Valley area, southwest of Boulder City, Nev., will be completed early in fiscal year 1960. The cooperative detailed soil survey and phretophite density study of Virgin River bottom lands in the Mesquite-Bunkerville areas extending from Lake Mead to the Arizona-Utah State boundary is also scheduled for completion in fiscal year 1960. Reconnaissance study will be completed in fiscal year 1961 of the potential Moapa Valley pumping project, Nevada, for supplying irrigation water to about 3,000 acres of irrigated land and a full water supply to about 6,000 acres situated in upper and lower Moapa Valleys and lower Meadow Valley, Wash., about 48 miles northeast of Las Vegas, Nev. to determine if it has sufficient merit to warrant undertaking project investigations. A reconnaissance study is scheduled to be started in fiscal year 1961 of the Panaca Valley project to determine the possibilities of providing supplemental water to about 2,000 acres of irrigated land and developing about 2,000 acres of new land in the vicinity of Panaca, Lincoln County, Nev.
Lower Colorado River, water salvage project.	Arizona, Nevada, and California.	115,000	----------	----------	32,000	83,000	This is a reconnaissance study of the feasibility of salvaging water for beneficial use by the eradication of phreatophytes or by other means in the bottom lands along the lower Colorado River between Davis Dam and the international boundary and determining methods of salvaging such water and putting it to a beneficial use. The opportunities for use of the water in the lower Colorado River Basin far exceeds the available supply. At the same time there are thousands of acres of land along the river covered with dense vegetation that is consuming large amounts of water.

							It is possible a substantial part of this water can be salvaged for beneficial use. Also, preliminary studies indicate there are some 90,000 acres of this land that would be suitable for agricultural use. In view of the importance of water to the future of the lower basin States this study should be completed as soon as possible.
Region 4:							
Fontenelle project	Wyoming	14,403	13,092	1,311			Located on Green River in southwestern Wyoming near town of Fontenelle. Reconnaissance of potential project of 3,200 acres to determine if project investigations are warranted and to assist State of Wyoming in selection of projects to use its allotted share of Colorado River water. The fiscal year 1960 program covers review of reconnaissance report completed in fiscal year 1959.
Juniper project	Colorado and Utah.	64,558	37,463	20,595	6,500		Reconnaissance to appraise the possibility of a development on the Yampa River in northwestern Colorado and northeastern Utah for power generation and irrigation utilizing storage at the potential Juniper, Cross Mountain, and Lily Park Reservoir sites. Report to be completed in fiscal year 1961.
Other projects, region 4		390,000	1,624			388,376	Reconnaissance investigations to be initiated or resumed after fiscal year 1961.
Region 5:							
Embudo Creek project	New Mexico	15,350		2,550	12,800		Located along Embudo Creek and its tributaries in northwestern New Mexico. Reconnaissance study of need for rehabilitation of an existing 7,500-acre irrigation system and supplementing the present inadequate water supply. Report to be completed in fiscal year 1961.
Goodland project	Oklahoma and Texas.	29,300		17,200	12,100		Reconnaissance study to evaluate the potentiality for irrigation development of some 15,000 acres downstream from the existing Denison Dam on the Red River in southeastern Oklahoma and northeastern Texas. Investigations made to date indicate that irrigation would increase agricultural production of the area and minimize crop losses presently suffered during periods of drought. Reconnaissance report to be completed in fiscal year 1961.
Mimbres closed basin	New Mexico	14,050	1,431	11,519	1,100		Located in Grand and Luna Counties in southwestern New Mexico. An inventory of the basin water resources and reconnaissance study of the potentialities for developing additional surface water supplies for supplemental irrigation and for industrial uses in nearby mining areas. The reconnaissance report is to be completed in fiscal year 1961.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
RECONNAISSANCE—continued							
Region 5—Continued							
Mora project	New Mexico	$69,639	$37,239	$5,950	$6,100	$20,350	Project involves rehabilitation of community ditch systems serving some 18,000 acres along Mora River in northeastern New Mexico. A reconnaissance report was completed in fiscal year 1956 which indicated that additional hydrologic data would be needed to reach conclusive findings. As a result, a cooperative program sponsored by the Bureau, the Geological Survey, and the State of New Mexico for collection of basic hydrologic data required for development of a plan for fully utilizing available water and land resources of the basin was initiated. This is the only work underway at the present time. A reconnaissance report thereon is scheduled for completion in fiscal year 1964, after the necessary hydrologic data have been collected and analyzed.
Ojo Caliente project	do	15,400			14,300	1,100	Project consists of some 2,000 acres in Rio Arriba County in northwestern New Mexico. Reconnaissance study to develop plans for rehabilitating the existing irrigation system, providing storage, if necessary, and also providing more efficient use of the limited water supply. Programing of a feasibility study is dependent upon findings of the reconnaissance study. The reconnaissance report is to be completed in fiscal year 1962.
Oklahoma Basins project	Oklahoma	300,000			39,100	260,900	Reconnaissance study of opportunities for transfer of waters from water surplus areas in eastern Oklahoma to water deficient areas to the west and otherwise provide for optimum development of the State's water supplies. Funds programed for fiscal year 1961 would permit initiation of a general reconnaissance survey of the entire State to collect, coordinate and evaluate information concerning problems and needs associated with water resources. Report to be completed in fiscal year 1964.

Prairie Dog Town and Salt Forks of Red River project.	Texas	165,000		88,050	50,300	26,650	Reconnaissance study to evaluate potentialities for developing new surface water supplies in project area. Water supply problems of the Prairie Dog Town and Salt Forks of Red River within the State of Texas are acute in some areas, and difficulty is experienced in developing new supplies of acceptable quality. Funds programed for fiscal year 1960 will permit initiation of basinwide reconnaissances. The reconnaissance report is to be completed in fiscal year 1962. Public Law 86-167 signed Aug. 18, 1959, authorized and directed the Secretary of the Interior to make this investigation.
Tularosa closed basin	New Mexico	23,800	2,748	18,852	2,200		Basin is located primarily in Otero County in south-central New Mexico. This is a study of potentialities for further development of basin surface water resources to alleviate existing municipal and irrigation water shortages. High influx of people brought in by military installations, a long extended drought period, and streams with no regulation that deliver most of the runoff in the winter months require optimum development of limited basin water resources. The reconnaissance report is to be completed in fiscal year 1961.
Other projects, region 5		47,400				47,400	Reconnaissance investigations to be initiated or resumed after fiscal year 1961.
Subtotal, reconnaissance		3,282,000	250,761	358,629	448,987	2,223,623	
BASIN SURVEYS							
Region 1:							
Chehalis River Basin	Washington	121,000	2,210	65,028	42,500	11,262	The Chehalis River Basin which occupies some 2,170 square miles in Pacific, Lewis, Mason, Grays Harbor, Cowlitz, and Jefferson Counties, in southwestern Washington, is located in what is generally considered a high rainfall area but so little of that rainfall occurs during the late growing season that irrigation is essential to maximum agricultural production. The area is rapidly outgrowing present water supplies and plans need to be formulated for water storage which will provide for the needs of industry and agriculture. The purpose of this study is to prepare a basinwide report outlining tentative plans for the development of the basin. In addition to irrigation, all other facets of the basin resources will be considered in order to plan for most optimum development. The report will be completed in fiscal year 1962.
Columbia River Basin	Idaho, Wyoming, Utah, Washington, Oregon, Nevada, and Montana.	2,000,000	1,264,101	72,362	74,000	589,537	Funds are required for Columbia River Basin studies for comprehensive plans, particularly for power and flood control, for important Army and reclamation dams in operation, under construction, or authorized. The funds provide for participation in the coordination and planning and operation of the Columbia River, for participation in the International Joint Commission engineering studies, and for cooperative studies with States and other agencies.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
BASIN SURVEYS—continued							
Region 1—Continued							
Kootenai River Basin	Idaho and Montana.	$65,995	$35,370	$30,625	----------	----------	Basin is located in northern Idaho and northwestern Montana. Investigation in progress to determine the basin potential which will aid in formulating an overall comprehensive plan of development for the basin, and to fit the plans of the United States in with those of Canada in an international plan of development, studies for which are now underway. Report scheduled for completion in fiscal year 1960.
Pend Oreille River Basin	Idaho and Washington.	140,000	----------	49,457	$20,000	$70,543	The Pend Oreille River Basin, located in northern Idaho and northeastern Washington, embraces that part of the Clarks Fork River drainage area extending from Lake Pend Oreille to the junction of Clarks Fork and Columbia Rivers. It is over 100 miles long and, embracing some 3,400 square miles in the United States, includes an undetermined area of potentially irrigable land. The principal purpose of the study is to determine the potential of the basin which will aid in formulating an overall comprehensive plan of development and outline the main areas of arable lands that might be worthy of further study as future irrigation developments.
Umpqua River Basin	Oregon	83,000	64,593	4,092	1,700	12,615	Basin is located in Douglas County in west-central Oregon along west side of coastal range. A special report evaluating the basin potential was completed in fiscal year 1956. This report was presented to the people of the area in fiscal year 1957 in order that they might better determine the course of further specific investigations. Funds requested in fiscal year 1960 and 1961 will provide only for the continuance of the stream gaging program by the U.S. Geological Survey.
Upper and Middle Snake River Basin.	Idaho, Oregon, and Wyoming.	1,066,700	953,023	98,677	15,000	----------	Investigation in progress. The purpose of this investigation is to evaluate the undeveloped land and water supply potential of the upper Snake River Basin upstream from and including the Powder River and arrive at a comprehensive multipurpose development

							plan. The amount and distribution of water supply available for irrigation of new lands and as a supplemental supply for the lands that are now inadequately irrigated will be covered. Domestic supplies, flood control, power production, and other multipurpose uses and the integrated use of new facilities with reservoirs already in operation will be studied. The study will cover all tributary streams, including the streams on the north of the basin that disappear into the basalt flows of the Snake plain. Ground water reservoirs of the basin are another source of additional water supply to be considered. Use of land and water resources in the basin is already developed in large measure. Formulation of future development plans must be incorporated into a basinwide plan in order to assure that future expansion is orderly and makes full and reasonable use of the resources and serves multiple purposes involved. A basin report is scheduled for completion in fiscal year 1961.
Other basins, region 1		388,000	13,685			374,315	Basin surveys to be initiated or resumed after fiscal year 1961.
Region 2:							
Central Valley Basin	California	1,987,425	1,115,780	27,925	43,720	800,000	Investigation in progress of engineering, agricultural, and economic factors relating to S. Doc. 113, 81st Cong., 1st sess., entitled "Comprehensive Plan for Water Resource Development, Central Valley Basin, Calif." Coordinated reservoir operation studies are being made with the State and local groups to insure a coordinated approach to the water development problems and that economic studies are kept up to date. Funds are included for preliminary repayment studies for unauthorized, multiple purpose Corps of Engineers projects. Studies of salinity conditions in the delta areas of the lower Sacramento River will be continued.
Lahontan Basin	California and Nevada.	162,000	105,996	3,864	2,000	50,140	These funds are required to cover expenses incurred by the Federal representative on the California-Nevada Compact Commission.
Lower Klamath River and adjacent basins.	California	761,976	720,776	41,200			Encompasses entire northwestern part of California, bounded by Pacific Ocean on the west, California boundary on the north, Russian River on the south, and extending to Trinity River at Lewiston on the east. Investigation in progress to inventory the natural resources and prepare a plan for their orderly development in the north coastal area of California, which contributes approximately 36 percent of the water supply of the State of California. A report is scheduled for publication in fiscal year 1960.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
BASIN SURVEYS—continued							
Region 2—Continued							
Santa Ynez River Basin		$90,187	$90,649	$2,971	$3,000	$3,567	Basin occupies southern Santa Barbara County in southern California. A report was completed in fiscal year 1956 but it was found that additional data were needed on the ground water potential. A cooperative study of consumptive use and rainfall penetration in the Santa Ynez River Basin, therefore, is being carried on with Geological Survey, Soil Conservation Service, Bureau of Reclamation, and Santa Barbara County Water Agency participating. The study is needed to develop data for ground water estimates.
Other basins, region 2		1,306,000	848,071			457,929	Basin surveys to be initiated or resumed after fiscal year 1961.
Region 3:							
Lower Colorado River Basin, general.	Arizona, California, New Mexico, Nevada, and Utah.	1,150,000	898,297	66,780	65,000	119,923	Investigations are in progress on comprehensive water supply studies of the Lower Colorado River Basin, including a cooperative program with the Geological Survey for collecting, analyzing, and publishing streamflow data, sediment, and quality of water data relating to the basin for use as a basis for future planning and examining issues in the controversy over Colorado River water. This program also includes the collecting of data and the preparation of a supplemental report to the Report on Water Supply of the Lower Colorado River Basin Lake Mead density current surveys, and general items covering basinwide matters.
Region 4:							
Bonneville Basin	Idaho, Utah, and Wyoming.	520,000	467,577	1,957	1,000	49,466	These funds are required to cover expenses incurred by the Federal representative on the Bear River Compact Commission.
Upper Colorado River Basin	Colorado, New Mexico, Utah, Arizona, and Wyoming.	1,725,000	1,366,166	7,828	8,000	343,006	These funds are required for studies of a general nature not applicable to a specific project such as consumptive use, sedimentation, and evaporation, and to cover expenses incurred by the Federal representative on the Upper Colorado River Commission.
Region 5:							
Pecos River Basin							

Region 5: Pecos River Basin	New Mexico and Texas.	557,769	550,104	7,665			Regional director's proposed report has been completed on a plan of additional development of the basin, presenting an inventory of the basin water resources and recommendations for development of additional surface water supplies by rehabilitation, water salvage measures, and regulation, to meet increasing water demands for irrigation, municipal and industrial purposes. Regional director's report will be completed in fiscal year 1960.
Rio Grande Basin	Colorado and New Mexico.	695,616	618,616	10,750	11,000	55,250	These funds provide for continuation of liaison and cooperation with other agencies on the complicated and serious problems affecting Bureau actions in the Rio Grande Basin.
Miscellaneous services: Print basin reports.		29,000			4,000	25,000	Funds are required for printing of basin reports. Such costs are chargeable to specific basins but are not scheduled with the basin survey costs since it is impossible to predict just when or what reports will be cleared in the review by States, Federal agencies, and the Congress for printing.
Subtotal, basin survey		12,849,668	9,105,014	491,181	290,920	2,962,553	
PROJECT INVESTIGATIONS							
Region 1: Baker project, upper division	Oregon	293,000	290,926	2,074			Project is located along Powder River near town of Baker in northeastern Oregon. This is an investigation of the feasibility of providing a water supply for 4,010 acres of new land and 13,990 acres of land in need of a supplemental supply. All fieldwork has been completed and the funds for fiscal year 1960 will provide for review and processing of the final report.
Blackfoot River project	Montana	134,000	18,756	83,587	31,657		Project consists of Ninemile and McNamara Dams and Reservoirs on Blackfoot River a short distance above its confluence with the Clarks Fork River. A feasibility report providing a plan for the development of a multipurpose dam and reservoir at the Ninemile site on the Blackfoot River was completed in fiscal year 1959. The powerplant would have an installed capacity of about 60,000 kilowatts and the reservoir would provide important upstream storage of about 1,000,000 acre-feet. Also, during fiscal year 1959 a study was started on the McNamara Dam and powerplant which will provide reregulating facilities for the Ninemile Prairie Dam, powerplant, and reservoir. This structure, operated in conjunction with Ninemile Prairie Dam, would regulate storage flows to the advantage of other downstream sites. It would also provide about 22,000 kilowatts of at-site power which would help alleviate power shortages in the Pacific Northwest. A report on this phase of the project is to be completed in fiscal year 1961.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 1—Continued							
Challis project, Challis Creek division.	Idaho	$109,000	$21,054	----------	$13,000	$74,946	Located on Challis Creek, a tributary of the Salmon River in Custer County, Idaho. A reconnaissance report was completed in June 1958. An investigation to feasibility standards is to be started in fiscal year 1961 to provide late-season supplemental water to 2,000 acres in the project area which, under present conditions, suffers shortages in all but exceptional years and a full supply for 200 acres of new land. This development would provide needed stabilization and expansion of the basic economy of the area. Local interest in the development of storage on Challis Creek is very widespread and sincere, both among farm operators and the community of Challis as well.
Chief Joseph Dam project	Washington	325,000	215,409	$63,990	45,601	----------	Project is located in north-central Washington in the vicinity of the Corps of Engineers Chief Joseph Dam on the Columbia River. Public Law 577 passed in 1952 reauthorized the Chief Joseph Dam project to include irrigation among its multiple purposes. Several areas in the vicinity of the dams have an irrigation potential that should be studied. A reconnaissance report on the St. Andrews-Sagebrush Flats area and feasibility reports for the Greater Wenatchee division, the Oroville-Tonasket unit of the Okanogan-Similkameen division, and the Alameda unit of the shoreline pumping division have been completed. A reconnaissance investigation of the Methow division which involves providing an adequate water supply for some 13,000 acres is now underway. Also underway are feasibility investigations of the Chelan division, which will provide a full water supply for 2,000 acres of new land and a supplemental supply for 3,800 acres and the Whitestone Coulee unit of the Okanogan-Similkameen division involving some 1,900 acres of land needing additional water. All of these studies will be completed in fiscal year 1961.
Cottage Grove project	Oregon	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Cottage Grove project	Oregon	96,775	63,931	32,844			This is an investigation of a plan to provide irrigation water for some 8,700 acres in the Willamette Basin near the town of Cottage Grove, Oreg. It now appears, however, there is not sufficient interest in irrigation in this area to justify proceeding with the study at this time. The funds for fiscal year 1960 will be used to prepare a "wrap-up" report for future use.
Crooked River project extension	do	190,000	61,392	34,010	52,000	42,598	This project is located in the Deschutes and Crooked River Basins in central Oregon. Investigation started in fiscal year 1959 to develop plans for the most beneficial use of the unassigned water (51,200 acre-feet) in Prineville Reservoir which will be in excess of the needs of the Crooked River project now under construction. Determination of the use of this unassigned water would achieve maximum agricultural development in the area and would also tie construction costs associated with the unassigned space to repayment contracts as soon as possible. A feasibility study of some 2,890 acres of land just above the main canal of the Crooked River project was underway in fiscal year 1959 and the regional director's report will be prepared in fiscal year 1960. Studies of a reconnaissance nature were also started in fiscal year 1959 to delineate other areas which could benefit from the unassigned space. This reconnaissance report is scheduled for completion in fiscal year 1960. Upon selection of a feasible plan, further studies will be made to utilize remaining unassigned space.
Eureka Flats project	Washington	182,000	34,583	39,115	57,000	51,302	Located along north side of Columbia River in Walla Walla County in southeastern Washington. Investigation started in fiscal year 1960 to provide a plan of development for some 12,600 acres of new land now used for grazing. Water would be obtained by pumping from the pool behind Ice Harbor Dam, an authorized Corps of Engineers project on the lower Snake River. A reconnaissance report, completed in fiscal year 1957, indicates that a feasibility study is justified.
Flathead River project	Montana	211,826	202,852	8,974			Investigation is in progress of a multiple-purpose project in Flathead County in northwestern Montana which involves diversion of the Middle Fork to the South Fork of the Flathead River behind existing Hungry Horse Dam. A reconnaissance study was made during fiscal year 1957 and a report prepared. Feasibility studies were started in fiscal year 1958 on the various plans outlined in the reconnaissance report to determine the most feasible plan. This project would provide upstream storage, at-site power production of some 88,000 kilowatts and downstream flood control benefits. Report is scheduled for completion in fiscal year 1960.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 1—Continued							
Main Weiser project	Idaho	$290,000		$52,582	$69,861	$167,557	Investigation to develop a plan to provide additional control of the surface waters of the Weiser River Basin in southeastern Idaho for the principal purposes of irrigation and flood control was started in fiscal year 1960. Water users in many parts of the basin experience limited production because of lack of late-season irrigation water. In 1955 and again in 1957 severe floods were experienced which caused extensive damage to farmlands and public and private improvements. A feasibility report is to be completed in fiscal year 1964.
Monmouth-Dallas project	Oregon	140,000	$43,273	64,606	28,000	4,121	Located in Willamette Valley in northwestern Oregon near towns of Monmouth and Dallas. A reconnaissance appraisal of the project was made in fiscal year 1955. Feasibility studies were started in fiscal year 1959 to provide a plan to furnish irrigation water to some 12,000 acres of land and municipal water supplies which are deficient under present conditions. There is very strong local interest in and desire for the project. A feasibility study is scheduled to be completed in fiscal year 1962.
Post project	do	127,447	102,403	25,044			Studies now underway of a plan for the development of some 8,300 acres of land in Crooked River Basin (Post County) in central Oregon. An adequate water supply would permit growing of alfalfa and hay crops which would be used for winter feeding in an area where the farm economy is based on the production of beef cattle. Studies to date indicate, however, that under present conditions the project is not economically feasible and the study is being terminated and a "wrap-up" report prepared.
Rathdrum Prairie project, Prairie division, East Greenacres unit.	Idaho	65,000	27,201	34,527	3,272		The East Greenacres Irrigation District system, which serves some 1,500 acres located along Idaho-Washington boundary east of Spokane, Wash., is in need of rehabilitation, and the main canal which brings water from Twin Lakes wastes considerable water en route. The purpose of this investigation is to develop plans for and

							test the economic feasibility of rehabilitating the system and expanding the project to include an additional 1,000 acres. There is very strong local support by members of the irrigation district who desire a system similar to that recently built by the Bureau for the neighboring districts (Avondale, Dalton Gardens, and Hayden Lake). A feasibility report is scheduled for completion in fiscal year 1961.
Red Prairie project	Oregon	261,600	31,590		60,000	170,010	Located in Willamette Basin in northwestern Oregon near town of Sheridan. Reconnaissance report was completed in fiscal year 1959. Feasibility studies should be started in fiscal year 1961 to provide a plan for the development of some 10,000 acres. Agricultural production on lands of the Red Prairie is seriously curtailed because of deficient precipitation during the critical growing season. Production is limited and diversification impossible under present conditions. There is strong local interest and support for the development of the project.
Rogue River Basin project	do	549,000	238,978	34,005	70,578	205,439	Project encompasses the Rogue River Basin in southwestern Oregon. A basin report was completed in 1950 but because other agencies had not completed their analysis, it was used only as a reference for subsequent studies. Feasibility studies have been completed for the Talent division (now under construction), the Merlin division and the Agate Dam and Reservoir. Work on Illinois Valley division was suspended in fiscal year 1956 and a preliminary report prepared on a plan for the development of 16,660 acres of new land. This report was submitted to the landowners recommending among other things that before further studies were made, an irrigation district be formed and assurance made that land would be cleared. These requirements have been accomplished and an updating and revision of the first report is scheduled for fiscal year 1961. Feasibility studies of the Evans Valley division were started in fiscal year 1959 to provide a plan for the development of about 4,000 acres of land of which 1,000 acres are now inadequately irrigated. Previous basin studies indicate a feasible development by providing storage facilities in the upper reaches of Evans Creek. Studies of the Applegate Valley division are scheduled to start in fiscal year 1962.
Salmon Falls project	Idaho	656,000	70,553	108,544	240,000	236,903	Project is located in south-central Idaho. The purpose of the investigation is to develop plans for diverting water from the Snake River at Milner Dam to provide critically needed supplemental irrigation water for about 32,000 acres of inadequately irrigated land, all that remains of an original project area of 150,000 acres, and a full water supply for 62,000 acres of dry land. A reconnaissance report was completed in fiscal year 1959 and feasibility studies leading to a report in fiscal year 1964 are now underway.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 1—Continued							
Snake Narrows project	Idaho and Wyoming.	$191,908	$185,895	$6,013			Project consists of a multipurpose dam and reservoir on the Snake River above the existing Palisades Reservoir. Reservoir will provide holdover storage capacity for irrigation, flood control and production of 270,000 kilowatts of power. Report is scheduled to be completed in fiscal year 1960. Storage space in the existing Palisades Reservoir has been oversubscribed and present and anticipated power requirements exceed the capacity of the existing facilities.
Snake River project, Garden Valley and Mountain Home divisions.	Idaho	1,310,000	889,880	19,189	$7,000	$393,931	These divisions are located in southwestern Idaho in the general vicinity of the city of Boise. Investigations of the Mountain Home division were initiated late in fiscal year 1953 to determine feasibility of using ground water in exchange for Boise River water for the Mountain Home division. A report on the Hillcrest unit, an initial phase of this development, was completed in fiscal year 1954 and a report on the overall plan was completed in fiscal year 1955. Studies of an alternate proposal involving a dam on the Snake River at the Guffey site were initiated in fiscal year 1955, culminating in a reconnaissance-type report early in fiscal year 1956. Feasibility studies of this development have continued on a plan to provide an adequate irrigation supply to some 119,140 acres of land, including 12,460 acres for which a supplemental irrigation supply will be furnished, and for the generation of 140,000 kilowatts of electrical energy. Irrigation water would be supplied from the Snake River, Boise River, and ground water. A feasibility report is scheduled for completion in fiscal year 1960. In fiscal year 1958 a feasibility study of the Garden Valley division was started. This multiple-purpose project would provide 2,400,000 acre-feet of upstream storage, ultimate production of 368,500 kilowatts of power, and irrigation water which could be used for possible expansion of the irrigation system of
							the Payette division of the Boise project. A report was

							the Payette division of the Boise project. A report was completed in fiscal year 1959. In fiscal year 1961 studies will be initiated on expansion of the Payette division and adjacent areas which could utilize the conservation storage capacity of the Garden Valley division.
The Dalles project, western division.	Oregon	171,500	168,410	3,090			Located along south bank of Columbia River near the city of The Dalles. A report was completed in 1947 and was one of the recommended projects in H. Doc. 473, 81st Cong., 2d sess., "The Columbia River." The project area is devoted primarily to cherry orchards and the gradual exhaustion of the ground water and below normal precipitation in recent years have curtailed crop production. In addition, the orchards have suffered critical frost damage because of the weakened conditions of the trees as a result of lack of water. An investigation of the project was started in fiscal year 1958 to revise and bring up to date the previous report to provide a plan for an adequate irrigation supply to some 5,420 acres of land. The fiscal year 1960 funds provide for completion of the final report.
Tualatin project	do	242,000	197,660	16,340	28,000		Project is located in Tualatin River Basin southwest of Portland, Oreg. A proposed report based on an irrigation development of some 31,000 acres was completed in fiscal year 1957 and submitted to the local interests. Preparation of final report was deferred pending decision by landowners regarding formation of an irrigation district and willingness to support the project. A recent canvass by the local interests revealed that the owners of a substantial part of the land in the project area are interested in receiving irrigation service. In addition, urban expansion within the project area has continued at an accelerated rate and several communities have found municipal and industrial water supplies are becoming critical. 3 of these municipalities have advanced a total of $15,000 toward the cost of a reanalysis of the project plan to incorporate their requirements. The funds for fiscal year 1960 will provide for resumption of the study with the objective of completing the final report in fiscal year 1961.
Umatilla project, south division, Birch Creek diversion unit.	do	38,000			10,000	28,000	Located in northeastern Oregon near city of Pendleton. Study should be started in fiscal year 1961 to provide needed supplemental water for the south division by diversion of additional water from Birch Creek to McKay Reservoir, an existing facility not before utilized to full capacity. This diversion was planned when the McKay Reservoir was constructed, but no work was done on the diversion canal. Because of continuing pressure for expansion of irrigated agriculture in Umatilla County, with the main need being for supplemental irrigation water, studies of the feasibility of this proposal should be completed as soon as possible.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 1—Continued							
Umpqua River project	Oregon	$568,000	$76,297	$66,826	$84,000	$340,877	Located in Douglas County in west-central Oregon on western slope of Cascade Mountains. A special report evaluating the potential of the Umpqua River Basin was completed in fiscal year 1956. This report was presented to the people of the area during fiscal year 1957 and several areas were selected for more detailed study. In fiscal year 1960 feasibility investigations will be continued on the plan to provide a full water supply for 12,430 acres and a supplemental water supply for 470 acres of the Olalla division on which a favorable reconnaissance report was completed in fiscal year 1959. In addition, a reconnaissance investigation will be completed on the 12,300-acre Roseburg division and initiated on the 20,000-acre Oakland division. The fiscal year 1961 program will provide for the continuation of the investigation of the Olalla division leading to a report in fiscal year 1962, completion of the reconnaissance report on the Oakland division, and initiation of feasibility studies on the Roseburg division. Areas of the divisions selected for study are faced with threats of floods during each winter season and extremely low natural flow during the summer season when water supplies are not sufficient to irrigate all lands covered by water rights. Provision for storage of winter flood flows would not only provide flood control benefits but would provide the basis for an expanded economy through the means of irrigation.
Upper Owyhee project	do	136,000	133,301	2,699	----------	----------	Investigation in progress to provide a plan for critically needed additional storage on the upper Owyhee River in southeastern Oregon to supplement existing water supply of the Owyhee project and to explore possibilities of providing supplemental water to inadequately irrigated areas in the upper Owyhee Basin. A proposed report has been prepared and the funds

							requested in fiscal year 1960 will provide for completion of the investigation.
Walla Walla project	Washington and Oregon.	574,000	334,117		45,000	194,883	Investigation scheduled to be started in fiscal year 1961 to provide an overall plan for the full development of the irrigation potential in the Walla Walla River Basin located in north-central Oregon and south-central Washington near the city of Walla Walla, Wash. At the present time there are some 30,000 acres of land being irrigated in this basin but water shortages are becoming critical throughout the area and the ground water table is receding at an alarming rate. As a result, there is strong local support for a water conservation development. The Bureau has completed reports on 2 of the principal areas involved, namely, the Dayton and Milton-Freewater areas, and has made some studies of possible storage sites on Walla Walla River. However, all single and inexpensive water diversions have been made, and it is essential that a coordinated study be made to insure maximum beneficial use of the limited water supply.
Yakima project, Kennewick division extension.	Washington	48,000	42,638	5,362			Located in south-central Washington just above confluence of Yakima and Columbia Rivers. Investigation started in fiscal year 1957 to provide a plan to furnish an adequate water supply to some 6,300 acres of dry land which was deferred from the area of the Kennewick division on which construction is approaching completion. The large population growth of the area and the need for additional land make it advisable to provide a plan for this development. The proposed report on this investigation was completed in fiscal year 1959, and fiscal year 1960 funds will be used to prepare the final report.
Investigations on which streamgaging is only work scheduled during fiscal year 1960 through fiscal year 1965.		902,000	131,381	7,334	14,590	748,695	These funds provide for continuation of streamgaging by the Geological Survey in connection with projects on which no other work will be underway during that particular year. During fiscal year 1961 this will involve the following projects: Birch Creek project, Idaho; Bruneau project, Wickahoney division, Idaho; Butter Creek project, Oregon; Dayton project, Washington; Flathead River project, Montana; Kootenai River Basin, Idaho-Mont.; Lemhi Valley project, Idaho; Raft River project, Idaho; Guffey unit, Mountain Home division, Snake River project, Idaho; Upper and Middle Snake River Basin, Idaho-Wyo.-Oreg.; and Yamhill project, Oregon.
Other projects, region 1		4,366,000	117,274			4,248,726	Investigations scheduled to be initiated or resumed after fiscal year 1961.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 2:							
Calleguas project	California	$395,000	$370,457	$14,569	$9,974		This investigation establishes the means of providing an interim water supply to an area of about 31,000 acres in Ventura County in southern California which has already experienced the return of some irrigated lands producing citrus fruits, avocados, and walnuts, to dry-land farming because of failing ground water supplies. Local interests are contributing 50 percent of the cost of the investigation. The water rights for the project are under litigation at the present time and the funds for fiscal year 1960 and fiscal year 1961 are for cooperation with the local interests in resolving this problem and for preparing a report.
Central Valley project: American River division, Auburn and Folsom south units.	do	697,961	661,961	36,000			These investigations will determine the feasibility of providing irrigation service for some 363,000 irrigable acres of land in Sacramento and San Joaquin Counties which would be served from American River. Auburn unit consists of Auburn Dam, Reservoir, and powerplant on American River above the existing Folsom Reservoir and the Folsom south unit consists of the main conveyance system to deliver the water from the American River to the service area. A supplemental water supply is necessary to maintain and improve an established agriculture based on ground water pumping and to protect municipal and industrial water supplies required by an expanding population. Livestock production, the raising and processing of fruit, grapes, tomatoes, sugar beets, corn, and other truck and field crops provide the principal components of the agricultural economy. The final reports will be prepared and processed in fiscal year 1960.
Cosumnes River division, Nashville unit.	do	371,000	169,290	6,064	50,069	$85,577	Investigation of the engineering and economic feasibility of providing multipurpose storage on the Cosumnes River south of Sacramento, Calif., to conserve the unused water resources of Cosumnes River for irrigation, municipal, and industrial uses, for hydroelectric power

							development, flood control, and fishery enhancement. A feasibility report is scheduled for completion in fiscal year 1963.
East side division (initial phase).	do	[1] 1,781,423	643,610	471,556	566,257	[1] 100,000	This investigation is designed to assist in solving the overdraft on ground water supplies in San Joaquin Valley and the need for replacement of lands in specialty crops being lost to urbanization. Although the Central Valley project imported supplies have materially assisted in preserving the area's agricultural economy, the overdraft continues. Further planning is needed to insure continued economic stabilization. Urbanization of lands previously devoted to citrus groves, truck crops and forage crops in southern and central California areas is creating a demand for replacement acreage. The rapid increase in population is creating corresponding increases in demands for foodstuff, especially perishable fruits, vegetables, and dairy products which depend on forage products from nearby agricultural areas. This division will consist of multipurpose dams and reservoirs on the major tributaries and an extensive conveyance system to transport excess waters of the northern rivers such as the Yuba, American, etc., to the water deficient areas to the south. These latter areas embrace some 4,000,000 acres of land for which the supplemental water requirements are estimated to be about 2,000,000 acre-feet annually. The report on the initial phase will present the overall plan and contain reconnaissance data on the Yuba unit and related facilities of the ultimate phase. The following units constituting this division will be integrated into an overall plan and report.
Conveyance unit	do	(188,228)		(59,947)	(128,281)		The purpose of the investigation is to determine a feasible plan for transporting excess water supplies of the northern streams to water deficient service areas in the southern part of the east side of the San Joaquin Valley. The unit is the link between the storage units and the service units of the East Side Division. Funds will be used for completing cost estimates for conveyance and offstream storage facilities.
Storage units:							
New Melones unit	do	(238,286)	(33,946)	(78,009)	(126,331)		New Melones Dam and Reservoir, located on the Stanislaus River in Calaveras and Tuolumne Counties, have been authorized for construction by the Corps of Engineers. This investigation will develop plans for utilization of the conservation storage capacity in that reservoir for irrigation, particularly in relation to the Central Valley project and the East Side Division. Reconnaissance studies have been made of potential costs and accomplishments. Report material will be prepared for inclusion in East Side Division feasibility report.

[1] Estimate of $100,000 for formulation of overall plan and preparation of report is included in this total but is not itemized below.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 2—Continued							
Central Valley project—Continued							
Storage units—Continued							
Yuba unit	California	($154,650)	($61,035)	($53,615)	($40,000)		Studies to reconnaissance standards to determine a plan for multipurpose storage in Yuba River in Nevada and Yuba Counties north of Sacramento, Calif., for irrigation, municipal, and industrial water, flood control, and power. Yuba River is the 3d largest tributary of the Sacramento River and a large volume of water is now being wasted into the Pacific Ocean. In addition, the river periodically causes extensive flood damage. Development of the unit would make a major contribution toward meeting the needs of an expanding population.
Service units:							
East Sacramento Valley unit.	do	(43,886)		(28,886)	(15,000)		This unit consists of some 100,000 acres in Sacramento, Placer, Yuba, Sutter, and Nevada Counties which are in need of supplemental water. The purpose of this investigation is to determine local water requirements and best means of providing irrigation service to those lands and to determine surplus waters available for transport from Sacramento to San Joaquin Valley. Funds for fiscal year 1961 are required to complete study as part of East Side Division investigation.
Fresno-Chowchilla unit	do	(202,082)	(174,817)	(27,265)			Study to explore means of coordinating operation of Buchanan Reservoir on Chowchilla River and Hidden Reservoir on Fresno River with water supply available from Millerton Lake through Madera Canal of the Central Valley project. All studies have been and are being coordinated with those of the Corps of Engineers.
Friant-Kern unit extension	do	(315,940)	(180,601)	(84,339)	(51,000)		Friant-Kern unit extends along canal from San Joaquin River to city of Bakersfield. Investigation to determine additional water needs and justification for serving those needs will be coordinated with other service area studies of East Side Division. Study will determine facilities required to conserve and convey im

ported water as a further step in meeting the water

							ported water as a further step in meeting the water problems of water deficiency in San Joaquin Valley.
Madera unit extension	do	(57, 154)		(27, 154)	(30, 000)		Madera unit is located along foothills of Sierra-Nevada Mountains extending some 37 miles north of San Joaquin River. Investigation to explore the possibility of utilizing water imported through proposed east side division conveyance system to provide supplemental water to areas of deficiency. Preliminary work on land use, water requirements, and ground water potential has been done. Funds for fiscal year 1961 are needed to continue studies on land use, economics, water supply, water requirements, and planning the distribution system.
Mendota-Kings unit	do	(356, 009)	(186, 677)	(74, 687)	(94, 645)		This study is to establish the most feasible method of making additional water available to portions of Fresno, Kings, and Kern Counties in the central part of the southern San Joaquin Valley. Agricultural development in the area has created a demand for water that already exceeds the supply available from the initial Central Valley project. Studies will be continued on water supply and requirements, land use, economics, and distribution design during fiscal year 1961.
Wasco-Maricopa unit	do	(125, 188)	(6, 534)	(37, 654)	(81, 000)		Investigation is to determine engineering and economic feasibility of supplying water to the extreme southern end of San Joaquin Valley near the city of Bakersfield. The area is presently dependent upon pumping from the ground water basin with present use far exceeding natural replenishment. Funds are required to determine if a supply can be furnished from Friant-Kern canal or an extension of that canal.
Sacramento River division, Yolo-Zamora unit.	do	101, 397	93, 656	7, 741			Located on west side of Sacramento River in Yolo County. Project would provide supplemental water for a large area of highly productive land in the Yolo-Zamora Water District and vicinity as a unit of the Central Valley project. Present economy is based upon the production and marketing of agricultural products. The principal products the project area would produce are alfalfa, tomatoes, sugar beets, irrigated pasture, nuts and truck crops. All fieldwork had been completed at the close of fiscal year 1958. Funds in fiscal year 1960 will be used for reviewing and processing of the final report.
San Felipe division	do	400, 000	3, 302	105, 599	170, 000	121, 099	A cost-sharing contract for the investigation was executed between the United States and the Santa Clara-Alameda-San Benito Water Authority, pursuant to H.J. Res. 585 of Aug. 27, 1958. The investigation will explore the feasibility of bringing supplemental water to a 300,000 acre area in which the population is increasing at a tremendous rate. The growth has resulted in the heavy overtaxing of local water supplies (principally ground water) and imperiling an abundant agricultural economy. The proposed feasibility report is scheduled for completion in fiscal year 1963.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 2—Continued							
Central Valley project—Continued							
Stony Creek division, Black Butte unit.	California	$63,434	$36,538	$26,896			The Black Butte Dam and Reservoir, located on Stony Creek in north-central California near city of Orland, was authorized for construction by the Corps of Engineers. The project would provide supplemental water for the Glenn County portion of the Sacramento canals service area. The purpose of this investigation is to develop a plan for utilization of the conservation in Black Butte Reservoir and make arrangements for repayment of reimbursable costs allocated to irrigation. The present demands are principally for irrigated pasture and forage crops for livestock with lesser demands for almonds, prunes, milo, field corn, olives, citrus, and sugar beets. This irrigation service could be integrated very easily with Central Valley project plans for ultimate service to Sacramento canals unit. The study is to be completed in fiscal year 1960.
Trinity River division, Clear Creek south unit.	do	132,000	14,785	43,033	$44,000	$30,182	The authorizing legislation for the Trinity River division directed the Secretary of the Interior to, among other things, "provide, by means of storage as necessary, such control and conservation of Clear Creek flows * * *." The purpose of the investigation is to explore the possibilities of local service from Whiskeytown Reservoir, under construction on Clear Creek, or alternate local sources, to some 15,000 acres near Redding, Calif., which are now receiving an inadequate supply. The raising of olives, irrigated pasture for livestock, peaches, and strawberries, is the basis of the local agricultural economy. Report to be completed in fiscal year 1962.
Klamath project:							
Butte division	do	316,962	299,364	17,598			Investigation in progress of the feasibility of providing irrigation water for 41,000 acres of land in the Butte Valley and Oklahoma units in north-central California—areas which are included in the upper Klamath River Basin. The project works would bring a firm water supply to lands for the production of barley for

							water supply to lands for the production of barley for malting, clover for seed, potatoes, alfalfa, and irrigated pasture. Surface drainage would be provided for the lands including those in the closed basin of Butte Valley. An organization of project landowners has participated financially in the study. A report is scheduled for completion in fiscal year 1960.
Klamath project extensions	Oregon and California.	205,860	184,965	20,895			The development consists of some 10,000 acres of land contiguous to the existing Klamath project in north-central California and south-central Oregon. These lands would be provided with a firm water supply. The crops most adaptable to the area include barley for malting, clover for seed, pasture, potatoes and livestock. Prospective water users have begun steps toward inclusion of the proposed service areas in adjoining existing irrigation districts. In fiscal year 1960 studies to define the service areas based on local desires will be completed and a feasibility report prepared.
Lost River storage unit	do	347,400	138,133	75,605	84,500	49,162	Investigation in progress to develop a feasible plan to provide for maximum settlement and agricultural development of the public lands in the Tule Lake area without decrease in the effectiveness of the upper Klamath River Basin as a waterfowl habitat. Supplemental and new water supplies are needed in Langell Valley to maintain the present agricultural economy of the local area and provide for its expansion. Water would be furnished to lands primarily for the production of irrigated pasture, barley for malting, alfalfa hay, oats, and clover. Report is to be completed in fiscal year 1962.
North coast project, Round Valley unit.	California	170,000	24,263	62,969	45,200	37,568	The investigation will be made to determine the most feasible plan for providing irrigation water and drainage for about 15,000 acres of land in Mendocino County about 150 miles north of San Francisco. Irrigation is needed to increase the yield and variety of crops to meet the demands of a rapidly increasing population in an area of only minor agricultural development. The main crops that would be grown under irrigation are pasture and forage crops—alfalfa, clover and hay. Some pears, walnuts, peaches, and truck crops have been successfully grown in the area. The report is scheduled for completion in fiscal year 1962.
Solano project, Monticello powerplant.	do	41,444	21,137	20,307			Investigation to determine need and feasibility of a powerplant to be located at the existing Monticello Dam, the key feature of the Solano project in Solano County. The dam now includes penstocks for power development. Engineering studies are essentially complete. Economics studies and other considerations relating to possibilities of Federal or non-Federal construction remain for completion.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 2—Continued							
Walker River project	California and Nevada.	$437,000	$193,609	$79,958	$35,000	$128,433	Investigation in progress to determine feasibility of regulating the surplus flows of Walker River for flood control, power generation, and late season supplemental irrigation of 71,000 acres in the vicinity of Yerington, Nev. The plan contemplates production of about 25,200 kilowatts of hydropower. The feasibility report is to be completed in fiscal year 1963.
Washoe project (ultimate phase)	do	531,469	163,772	20,199		347,498	Washoe project is located in east-central California and western Nevada in the vicinity of Reno, Nev. An investigation recently was undertaken to determine the desirability of adding Hope Valley division to the authorized Washoe project, initial phase, to provide a new and supplemental water supply for 5,300 acres and to provide 15,000 kilowatts of hydroelectric power. Studies to date indicate Hope Valley can be developed independent of the Washoe project, initial phase. Status report scheduled for fiscal year 1960 will give results of investigations to date and provide basis for future investigations.
Other projects, region 2		4,689,900				4,689,900	Project investigations to be initiated or resumed after fiscal year 1961.
Region 3:							
Bridge Canyon project	Arizona	1,187,000	1,165,117	9,800	12,083		Investigations of a potential power project at the Bridge Canyon site on the Colorado River about 117.5 miles upstream from Hoover Dam, transmission lines to load centers, and a silt retention dam at the Coconino site on the Little Colorado River. The funds requested are for continuing the collection of sediment samples and discharge data on the Little Colorado River and for miscellaneous activities relative to proposals for independent development of the project by Arizona or California.
Dixie project	Utah	379,000	326,575	11,800	30,000	10,625	Located in Virgin River Basin in Washington County near St. George, Utah. Investigations of a potential multiple-purpose project to provide irrigation to about

							7,000 acres of new land and a supplemental water supply for about 9,000 acres, generation of hydroelectric power, flood control, recreation and fish and wildlife benefits. A report was completed in 1953 and the funds for fiscal year 1960 and fiscal year 1961 are required to reanalyze the project and bring the report up to date based on current conditions.
Eldorado Valley project	Nevada	155,000		4,900		150,100	Feasibility investigations of a potential project to pump water from Lake Mead for industrial, municipal, and homesite irrigation uses in Eldorado Valley south of Boulder City. A reconnaissance report was completed early in fiscal year 1960. The local interests have engaged a private consultant to make detailed studies and the Bureau has deferred further investigations of the project. Part of the fiscal year 1960 funds will be used to cooperate with the local interests in developing their plans.
Marble Canyon project	Arizona	934,000	919,245	10,070	4,685		Investigations of a potential power project on the Colorado River about 32.8 river miles below Lees Ferry, Ariz., and a silt retention dam on the Paria River near the Utah-Arizona State boundary. A report to be completed in fiscal year 1960. The States of Arizona and California have expressed their intent, independently of one another, to build this project and the funds for fiscal year 1961 will be used to continue any necessary cooperation with those States.
Middle Gila River project	do	350,000	276,660	56,560	10,000	6,780	Feasibility investigations now under way of a multiple-purpose project for flood control and supplemental irrigation water for 100,000 acres of land in the San Carlos project area, Arizona. The funds for fiscal year 1960 will be used to complete the feasibility report and those for fiscal year 1961 are required to continue collection and analysis of data on sediment load in the Gila River.
Winslow project	do	233,500	56,260	2,940	4,000	170,300	Potential irrigation development on Little Colorado River near Winslow, Ariz., which will involve some 19,750 acres of land. Funds for fiscal year 1960 and fiscal year 1961 will be used for continuation of stream gaging to provide data needed for future investigations.
Other projects, region 3		668,000	110,839			557,161	Investigations to be initiated or resumed after fiscal year 1961.
Region 4:							
Animas-La Plata project	Colorado and New Mexico.	1,188,000	667,156	146,038	130,500	244,306	Located in San Juan River Basin in La Plata County, Colo., and San Juan County, N. Mex. Investigation in progress to evolve multiple-purpose plan for efficient utilization of waters of Animas and La Plata Rivers and to provide data for use by Colorado and New Mexico in selecting projects for use of allotted Colorado River water. The plan envisions full irrigation of some 61,000 acres, supplemental water for 25,600 acres, and production of 166,000 kilowatts of power. It is a priority project under sec. 2, Public Law 485, 84th Cong., 2d sess.

UNIVERSITY OF MICHIGAN LIBRARIES

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 4—Continued							
Bear River project	Idaho and Utah	$1,065,000	$800,710	$117,443	$133,000	$13,847	The Bear River and its tributaries now supply irrigation water to over 480,000 acres of land in northern Utah and southeastern Idaho. A substantial part of this land, however, receives an inadequate supply to achieve full production and there are thousands of acres of excellent land remaining unirrigated while an average of nearly 1 million acre-feet of water annually flows into the Great Salt Lake and is lost. The purpose of this investigation is to develop plans for a project that would furnish a full water supply to some 50,700 irrigable acres, supplemental water for 29,300 acres, produce 45,400 kilowatts of hydroelectric power and provide municipal and industrial water to meet the needs of the expanding population and industry in Box Elder, Utah.
Bostwick Park project	Colorado	151,507	113,207	33,300	5,000		Investigation in progress to provide a full water supply for about 1,500 acres and supplemental irrigation water for some 5,800 acres presently in short supply near Montrose, Colo., by construction of Silver Jack Dam and Reservoir on Cimarron Creek. A feasibility report is scheduled to be completed in fiscal year 1961. The State of Colorado is contributing $18,000 of the fiscal year 1960 program. It is a priority project under sec. 2, Public Law 485, 84th Cong., 2d sess.
Dallas Creek project	do	448,000	111,798	91,516	79,000	165,686	Located along Uncompaghre Creek in southwestern Colorado near town of Montrose. Investigation in progress of project to provide a full water supply for about 15,800 acres and supplement the water supply for some 6,200 acres to eliminate chronic shortages as outlined in 1950 Gunnison River reconnaissance report. Study of the feasibility of developing 16,000 kilowatts of hydroelectric power is also contemplated. A feasibility report is to be completed in fiscal year 1964. Project has been assigned priority under sec. 2 of Public Law 485, 84th Cong., 2d sess.
Dolores project	Colorado and Utah.	877,000	634,414	104,811	119,000	18,775	Located in southwestern Colorado and southeastern Utah near town of Dolores. Investigation in progress,

Dolores project	Colorado and Utah.	877,000	654,474	104,511	118,000	12,715	Utah near town of Dolores. Investigation in progress, scheduled for completion in fiscal year 1962, of plans to provide a full water supply for 35,500 acres of presently dry farmed land and a supplemental supply for 30,600 acres urgently in need of additional water. It is a priority project under sec. 2, Public Law 485, 84th Cong., 2d sess.
Fruitland Mesa project	Colorado	330,885	302,953	22,924	5,008		Investigation in progress, scheduled for completion in fiscal year 1961, of plans to provide new and supplemental irrigation water to an important agricultural area of some 23,400 acres in Delta and Montrose Counties in western Colorado. It is a priority project under sec. 2, Public Law 485, 84th Cong., 2d sess. $12,000 of the funds programed for fiscal year 1960 are contributions by the State of Colorado.
San Miguel project	do	750,000	245,879	57,035	30,000	417,086	Investigation in progress of a project located in Montrose and San Miguel Counties in southwestern Colorado which will furnish a full irrigation water supply for 39,800 acres of new land and supplemental water for some 10,200 acres with late season water shortages. The project has a favorable benefit-cost ratio as indicated in a 1953 reconnaissance report and is one of the priority projects under sec. 2 of Public Law 485. A feasibility report is scheduled to be completed in fiscal year 1965. The fiscal year 1960 program includes a contribution of $22,000 by the State of Colorado.
Sublette project, Buckskin division	Wyoming	543,000	385,993	28,025		128,982	Located in Sublette County in southwestern Wyoming. Investigation in progress to determine feasibility of regulating and utilizing flows of the Green River tributaries for supplying full water requirements to some 37,400 acres, supplemental water for some 10,500 acres in short supply and producing 2,000 kilowatts of power. A feasibility report is to be completed in fiscal year 1963. It is a priority project under sec. 2 of Public Law 485, 84th Cong., 2d sess.
West Divide project	Colorado	785,000	305,469	161,374	92,360	225,797	Located in Garfield and Pitkin Counties in western Colorado in vicinity of Carbondale and DeBeque. Investigation in progress to determine feasibility of project to develop new and supplemental irrigation water for about 65,600 acres and municipal and industrial (oil shale) water. Project could also produce about 4,500 kilowatts of power. It is a priority project under sec. 2 of Public Law 485. The fiscal year 1960 program includes $44,822 of cost of mapping contributed by State of Colorado.
Woodruff–Cokeville project	Utah and Wyoming.	135,413	120,937	14,476			Investigation in progress to determine feasibility of developing supplemental water for about 43,900 acres along Bear River in vicinity of Woodruff, Utah, and Cokeville, Wyo. Report is needed to assist States of Utah and Wyoming and local irrigators in planning for most advantageous use of water as apportioned by the Bear River Compact which was approved by Congress in 1958. Report to be completed in fiscal year 1960.

UNIVERSITY OF MICHIGAN LIBRARY

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 4—Continued							
Other projects, region 4		$4,938,000	$699,172			$4,238,828	Feasibility studies to be initiated or resumed after fiscal year 1961.
Region 5:							
Arbuckle project	Oklahoma	117,379	106,887	$10,492			Located on Rock Creek, a tributary of the Washita River, in south-central Oklahoma. Feasibility investigation of a plan to provide municipal and industrial water supplies, flood control and other benefits in an area where there is an acute shortage of water at the present time, coupled with a rapidly increasing need for additional water due to community and industrial growth. A reconnaissance report completed during the 2d quarter of fiscal year 1958 summarized potentialities of the project. Following review of the report and accomplishment of participation agreements with local interests, feasibility studies were undertaken during the 3d quarter of fiscal year 1958. The report will be completed in fiscal year 1960.
Chikaskia project	Kansas and Oklahoma.	109,117	11,217	16,050		81,850	Located in southeastern Kansas and northeastern Oklahoma in vicinity of Wellington and Caldwell, Kans., and Enid, Blackwell, and Braman, Okla. Feasibility investigation of a plan to provide municipal water supply, irrigation, flood control, and other benefits in an area where critical water shortages prevail, particularly during the dry summer months. A reconnaissance report completed in fiscal year 1956 which summarized potentialities of the project was furnished to State and project interests. The project interests have been considering other means of obtaining needed water supplies. Funds programed for fiscal year 1960 will be utilized to provide appropriate assistance to project interests in connection with their consideration of Bureau of Reclamation findings. Further investigations by the Bureau have been deferred pending decision by the local interests.
Liberty Bottoms project	Oklahoma and	95,880	$6,641	$3,239			

Liberty Bottoms project	Oklahoma and Texas.	95,880	36,841	52,339	$6,700		Feasibility investigation of a plan to develop irrigation on about 12,100 acres of land along the Red River below Denison Dam in southeastern Oklahoma and northeastern Texas. A reconnaissance report was completed in fiscal year 1958 and submitted to the local interests for their information. Feasibility investigations are now underway and a report is scheduled to be completed in fiscal year 1961.
Mangum project	Oklahoma	163,155	59,555	18,900	44,600	40,100	Investigations made to date of this project on the Salt Fork of Red River indicate that the potential development probably is the most favorable source of an urgently needed supplemental water supply for the existing W. C. Austin project in south-central Oklahoma. However, available geologic data indicate that excessive reservoir leakage might occur. Funds scheduled for fiscal year 1960 would initiate geologic explorations to determine subsurface conditions and corrective measures needed. Contingent upon these findings, feasibility study would be completed in fiscal year 1962.
Mountain Park project	do	142,733	31,941	81,092	29,700		Located on Otter Creek in Tillman County in southwestern Oklahoma. Feasibility investigation of a plan to provide municipal water supplies and other benefits in the project area. A reconnaissance report completed in fiscal year 1956 summarized potentialities of the project, including flood control and an irrigation potentiality. Urgent need for municipal water supplies by the project cities, together with present and contemplated expansion of facilities at the Altus, Okla., Air Force Base, makes the earliest possible provision of new or supplemental water supplies imperative for this area. The feasibility report will be completed in fiscal year 1961.

UNIVERSITY OF MICHIGAN LIBRARY

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 5—Continued							
Rio Grande water salvage project	New Mexico and Colorado.	$600,000	----------	$68,450	$76,000	$455,550	Investigation of the opportunities for salvage for beneficial use of Rio Grande Basin waters through channelization, drainage, and other measures. The need for such salvage has been recognized in numerous reports and the results of experience to date with the channelization program on the middle Rio Grande offers ample evidence of the value of such works in reducing water losses. Occurrence of the recent extreme and prolonged drought, increasing basin water demands and deterioration of channel conditions through the Middle Valley with consequent great increase in water losses, resulted in New Mexico and Colorado being in debit status under the Rio Grande Compact and emphasized the need for water salvage measures. Public Law 858, 80th Cong., 2d sess., 1 of the acts authorizing the middle Rio Grande project, directed the Bureau of Reclamation, in conjunction with other Federal agencies, to study feasible means of effecting water salvage in the Rio Grande Basin above Caballo Reservoir. Certain water salvage measures are being accomplished in connection with construction of that project and additional basic data are being collected. An extensive program of hydrologic data collection is necessary to evaluate the extent and location of present and potential water losses as a basis for development of feasible water salvage plans. The funds scheduled for fiscal year 1960 would be used for initiation of water salvage studies as directed by Public Law 858 to identify, through reconnaissance studies, those areas meriting detailed study in New Mexico and Colorado. The reconnaissance report for the New Mexico Division will be completed in fiscal year 1960, and for the Colorado Division in

						fiscal year 1961. The feasibility studies will be summarized in a report scheduled for completion in fiscal year 1967.
San Juan-Chama project	Colorado and New Mexico.	1,172,936	$1,122,995	29,041	20,000	Project involves transbasin diversion of water from the headwaters of the San Juan River in southwestern Colorado to the Rio Grande Basin in New Mexico. Legislation authorizing the Colorado River storage project recognized the San Juan-Chama project as a participating project and assigned priority to its investigation. A feasibility report has been completed and is being processed for submission to Congress for authorization. Fiscal year 1960 and fiscal year 1961 funds would be used to maintain liaison, make any necessary additional studies, and effect cooperation with concerned local and State agencies and other interests in connection with processing of the report and its consideration by Congress. The plan proposed for authorization in the feasibility report would provide supplemental water for about 39,330 acres of the Rio Arriba division and 81,610 acres of irrigable land in the Middle Rio Grande conservancy district.
San Luis Valley project	Colorado	259,833	243,149	6,684	10,000	Project is located in south-central Colorado in Rio Grande, Mineral, Hinsdale, Sagauche, and Conejos Counties. The Conejos division has been constructed and is in operation. A feasibility report on the Rio Grande and Weminuche Pass divisions is under review. Amounts scheduled in fiscal year 1960 and fiscal year 1961 are for completion of the feasibility report on the Closed Basin division; continuation of the program of water sampling and measurement of ground water fluctuations for that division; continuation of hydrologic studies, snow surveys, and runoff forecasts; and maintenance of contacts with local interests in the Rio Grande division.

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Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 5—Continued							
Texas basins project	Texas	$5,484,855	$3,347,812	$667,643	$458,000	$1,011,400	Investigation directed toward development of an overall plan for optimum development of the flows of the Texas gulf streams for municipal and industrial water supply, irrigation, flood control, fish and wildlife, recreation and related purposes, was initiated by the Bureau in 1955 with completion of the report scheduled for fiscal year 1961. State interest, need for coordination of related efforts of other Federal agencies, and recognition of national interest involved resulted in authorization of the U.S. Study Commission for Texas by Public Law 85-843 in August 1958 to formulate a plan of development of the land and water resources of all but 2 of the basins being studied by the Bureau. The Commission report is scheduled for completion by the end of fiscal year 1961 and will provide findings which will influence the plan of development to be advanced in the Bureau's Texas basins project report. The Bureau of Reclamation's report, therefore, has been delayed until fiscal year 1963 and additional funds scheduled for cooperation with the Study Commission and to coordinate the Bureau's plans with those of the Commission. The urgency of providing additional water supplies to meet forecasted municipal and industrial needs requires that reports on units of the overall project, which are justified as individual developments and would be compatible with any plan of overall development, be processed to Congress for authorization prior to completion of the Texas basins project report. As a result, an investigation is now in progress in cooperation with Lower Colorado River Authority to formulate a multiple-purpose plan for the Columbus Bend unit for increasing the dependable water supply obtainable from the lower Colorado River to meet forecast municipal and industrial needs and provide fish and wildlife

						benefits of national significance and incidental flood control, recreation, and possibly irrigation benefits. This study will be completed in fiscal year 1960. An investigation is also in progress in cooperation with Guadalupe-Blanco River Authority to formulate a multiple-purpose plan for the Hochheim unit to increase the dependable water supply obtainable from the Guadalupe River to meet forecast municipal and industrial needs and provide needed flood control and other benefits through development of a dam and reservoir at the Hochheim site. Feasibility report now scheduled for fiscal year 1961. In addition, an investigation is to be initiated in fiscal year 1961 to formulate a multiple-purpose plan for the Falls City unit to regulate flows of the San Antonio River for water supply, flood control, and related purposes through development of a dam and reservoir at the Falls City site. Feasibility report is scheduled for fiscal year 1962.
Waurika project	Oklahoma	208,109	191,612	9,297	3,500	3,700	Located on Beaver Creek near Waurika, Okla. Feasibility investigation of a plan to provide municipal and industrial water supplies, irrigation of some 2,000 acres, and flood control and other benefits. A reconnaissance report was completed in fiscal year 1957 and feasibility investigations are now under way with a report scheduled to be completed by the end of fiscal year 1960. Funds for fiscal year 1961 will be used to continue sediment gaging and hydrologic data collection programs.
Wichita Falls project	Texas	211,169	31,869	4,900	----------	174,400	Located in Little Wichita River Basin in Wichita and Clay Counties near Henrietta, Tex. A reconnaissance report summarizing potentialities of the Little Wichita River primarily for a much needed additional water supply for the city of Wichita Falls, Tex., and Sheppard Air Force Base was completed in fiscal year 1957, and furnished to State and local interests. The local interests have since been considering alternate means of providing the needed water supplies. In August 1958 the electorate of Wichita Falls defeated a bond proposal which would have developed the water resources of the Little Wichita River by private financing. However, at the end of fiscal year 1959, continued exploration of financing plans was being made by project interests. Funds scheduled for fiscal year 1960 will be utilized to provide appropriate assistance to the project interests in connection with their consideration of Bureau of Reclamation findings. Further investigations by the Bureau have been deferred pending a decision by the local interests.
Other projects, region 5	----------	11,100,000	----------	----------	----------	11,100,000	Investigation to be initiated or resumed after fiscal year 1961.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
PROJECT INVESTIGATIONS—continued							
Region 7:							
Fryingpan-Arkansas project	Colorado	$980,000	$911,811	$40,880	$27,309	----------	Project involves transbasin diversion from the headwaters of the Fryingpan River in the Colorado River Basin into the upper Arkansas River Basin in central Colorado. A feasibility report has been completed and submitted to Congress for authorization. During fiscal year 1959, local interests suggested the substitution of a reservoir on the Fryingpan River for the Aspen Reservoir proposed in the report now before Congress. These studies were initiated last year with funds contributed by the State of Colorado and a report thereon is to be completed in fiscal year 1960. The balance of the funds in fiscal year 1960 and those for fiscal year 1961 will be used to service Congressional consideration of authorization.
Granada project	Kansas and Colorado	72,000	50,506	16,158	5,336	----------	This is an investigation being made in cooperation with the Corps of Engineers and the State of Kansas of plans for a multipurpose development on the Arkansas River in eastern Colorado and western Kansas to conserve return flows and flood waters for irrigation purposes. There appears to be little interest in irrigation at this time and it is planned to complete the study early in fiscal year 1961 with the preparation of a status report summarizing findings to date.
Other projects, region 7	----------	1,301,000	----------	----------	----------	$1,301,000	Investigations to be initiated or resumed after fiscal year 1961.
Miscellaneous services:							
Cost of minor work in connection with completed reports.	----------	539,500	23,697	48,786	59,200	407,817	After feasibility reports are completed they are submitted to the States and other Federal agencies for review prior to their submission to Congress for authorization During this review process and during Congressional consideration of the projects, experience has shown that it will no doubt be necessary to perform some additional work on some of those investigations but it is impossible to predict in advance which of the reports will be so

							involved, or the amount of additional work required. The funds programed for this item will provide for this work as it arises and the costs incurred will be charged to the applicable investigation.
Print project reports		104,670		14,670	15,000	75,000	Funds are required for printing of project reports. Printing costs are chargeable to the specific projects but are not scheduled with those projects because it is impossible to predict just when and what reports will be cleared in the review by States, Federal agencies, and the Congress, and ordered to be printed.
Subtotal, project investigations		60,640,947	20,130,872	3,739,038	3,274,540	33,496,497	
GENERAL ENGINEERING AND RESEARCH							
Planning studies:							
Region 2:							
Land subsidence studies		103,701	91,171	12,530			Land subsidence is known to exist in 3 extensive areas of the lower San Joaquin area in Central Valley, Calif. Settlement of the deep alluvial or sedimentary soils which are irrigated to a great extent from ground water pumping present a problem in construction and maintenance of engineering features required for the development of these arid areas as well as a major maintenance problem with existing structures some of which already have been affected. The studies are directed toward the determination of causes and controlling factors in such problem areas, looking to possible means of alleviating or minimizing the adverse effects of such subsidence. The program for fiscal year 1960 will provide for participation by the Bureau in this program and the preparation of a report by the interagency committee.
Region 3:							
Colorado River water right litigation		92,000	71,916	7,880	2,000	10,204	Litigation is now underway in the Supreme Court case of *Arizona* v. *California* for determination of the respective rights of California and Arizona to the water in the Colorado River. The funds programed are for research and collection of data which will have a bearing on the litigation. Costs also are being incurred for the reproduction and review of transcripts of the hearings and for other miscellaneous activities including correspondence and meetings with States, Federal agencies, and other interested parties relative to data bearing on the case.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
GENERAL ENGINEERING AND RESEARCH—continued							
Planning studies—Continued							
Miscellaneous services:							
General planning studies		$1,489,604	$869,326	$79,200	$81,000	$460,078	These funds are allotted to the Commissioner's office, Denver, for general planning studies not related to specific projects but which are important to the Bureau's overall program. The objective of this research program is the development of improved procedures and techniques for evaluating and planning future reclamation projects to insure the fullest utilization of the water resources of the West. This will involve procedures for determining water resources; water requirements of the potential projects and other basin uses; inflow spillway design floods for dams and other structures; amount and disposition of sediment in reservoirs, conveyance channels, and canals; expected aggradation and degradation of streams as a result of construction of water control works, etc.; and the most beneficial operation of the system of reservoirs in the development and operation of river basin systems.
Hydrologic studies		555,403	415,843	19,560	20,000	100,000	These funds are to permit the Bureau to cooperate with other agencies, through technical subcommittees of the Interagency Committee on Water Resources as well as through direct interagency agreement on various investigative projects. Through these projects, various types of basic data and various items of research, involving hydrologic procedures or equipment, which are of interagency value, are jointly financed and carried on. These projects vary in nature, with the Bureau sharing in those which are aimed at development of better data, procedures or equipment for use in hydrologic and sedimentation studies in western areas, which in turn have as their objective the better use of the limited water supplies of the West. During fiscal year 1960 and fiscal year 1961, funds are to be used for evaporation and transpiration studies; development of radioisotope sediment density sampler, development of equipment

						sediment density sampler, development of equipment for measuring sediment loads in streams, and for bringing up to date sediment load inventory and hydrologic basin maps.
Subtotal, planning studies		2,240,708	1,448,256	119,170	103,000	570,282	
Engineering methods and materials research:							
Structural, including concrete		339,200			44,000	295,200	Funds will be used to conduct research directed toward improving concrete as an engineering material and reducing its cost. Investigations will be made into methods of beneficiating low quality concrete aggregates by such means as elastic fractionation, hydraulic jigging, and heavy media separation; to establishing procedures for the effective use of water-reducing retarding agents; to extending knowledge of the factors that influence the durability of concrete; and, to improving methods of evaluating potential performance of concrete. Investigations will be made (*a*) to aid in the design of various reinforced concrete structures, (*b*) on properties of high strength concrete for pipe, (*c*) on high bond reinforcing steel, (*d*) on unreinforced concrete tunnel linings, (*e*) on prestressed concrete and precast concrete slabs, and (*f*) on stress-strain relationships in concrete and rock when completely restrained.
Cement, pozzolan, and admixtures		136,800			16,000	120,800	This research is concerned with portland cement, pozzolans and admixtures as they affect the properties and economy of concrete. Investigations will be made to enable the preparation of better specifications for these products. These investigations are often carried out on a cooperative basis with trade associations and other Government agencies. Studies will be made on the behavior of cements and pozzolans in concrete particularly with respect to chemical composition and the hydration products developed, and on the effects of different pozzolans and admixtures on the durability of concrete. False set in cement is another problem requiring further attention.
Hydraulic studies, including oxygen content of reservoirs and streams.		239,800			30,400	209,400	Funds will be used to extend investigations performed for specific projects so that the data obtained may have general application. Unresolved are studies of energy dissipators for high velocity flows, cavitation problems, means of improving performance of gates, valves, pipe, and conduits, air demand of siphons, protection of banks against waves and scour, and development of improved testing equipment. Exploratory studies will be initiated on the relationships of water control structure operations on dissolved oxygen content and the development of techniques for replenishing oxygen where necessary.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
GENERAL ENGINEERING AND RESEARCH—continued							
Engineering methods and materials research—Continued							
Earth, rock, bituminous, and riprap materials and placement methods.	----------	$299,300	----------	----------	$38,000	$261,300	Earth research will be directed to improvement of undisturbed soil sampling and soil testing methods, and to increasing knowledge of the engineering properties of soils for direct application to the design of earth dams and other Bureau structures. Inplace testing methods and rapid nuclear density and moisture meters will be studied for more economical construction control of earthworks and in the investigation of subsurface soil conditions. Particular attention will be given to the improvement of soils by adding gravels and chemicals; to pore-water pressure effects on stability of earth dams; and to the effects of improving backfill conditions on concrete pipe stresses for the purpose of obtaining more economical structure designs. Investigations on the physical properties of rock varying in mineralogic composition will be extended to provide general reference data, and to permit more accurate early evaluation of prospective structure sites in advance of detailed studies. New asphaltic products for surfacing canals, reservoirs and dams, and improved bituminous materials for roofing and grouting purposes will be tested and evaluated. Studies will continue on improved methods of evaluating rock riprap, and on the use of substitutute riprap, such as soil-cement and asphaltic materials, for areas, especially in the Midwest, where rock is unavailable. New placement techniques will be evaluated.
Evaporation reduction materials and methods.	----------	418,600	----------	----------	56,000	362,600	Funds will be used to continue investigations in the practicability of employing certain chemicals as surface films to reduce evaporation from reservoirs. Encouraging results were obtained on a 2,500-acre reservoir, Lake Hefner, in 1958. Newly developed materials and techniques showed additional promise.
							Investigations will be made concerning better materials,

						Investigations will be made concerning better materials, better methods of application, better methods of detecting the film, biological and water quality aspects, thermal and wind effects, and applicability to stock ponds.
Corrosion, plastics, special applications and techniques.	----------	141,300	----------	----------	15,600	125,700	New developments in protective coatings, particularly for protection of submerged and buried steel, and including erosion resistant coatings, will be evaluated. Studies will be made on cathodic protection, and improved methods of measuring corrosivity of soil and water. Further information will be gathered on new joint sealing compounds, and developments in the uses of plastics as an engineering material. Improved methods and techniques will be sought for the analysis and application of new products, including the use of radioisotypes, X-ray diffraction spectographs, and chemical methods.
Foreign currency research, necessary support in U.S. dollars.	----------	100,000	----------	----------	50,000	50,000	The fiscal year 1961 budget includes, as a separate request, funds to cover research to be conducted in foreign countries under the foreign currency research program (7 U.S.C. 1704, sec 104k). This item is for administrative support, such as travel to and from ports of embarkation which cannot be paid in for foreign currency.
Subtotal, engineering methods and materials research.		1,675,000	----------	----------	250,000	1,425,000	
Total, engineering and economic investigations.		80,688,323	$30,934,903	$4,708,018	4,367,447	40,677,955	
ADVANCE PLANNING							
Region 1: Chief Joseph Dam project, Greater Wenatchee division.	Washington----	300,885	299,237	1,648	----------	----------	The Greater Wenatchee division of the Chief Joseph Dam project, consisting of 4 units—East, Brays Landing, Howard Flat, and Moses Coulee—was authorized on May 5, 1958. The Moses Coulee unit was deferred because no steps were taken to enter into the single irrigation district, required by the authorizing act. The remaining 3 units total some 6,700 acres of irrigable land. The development of an irrigation water supply for the division is urgently needed to replace land that will be or has been lost through subdivision of apple orchards for housing areas, the construction of a new highway through the division, and the potential construction of Rocky Beach and Wells Dams. The development of new agriculture land will also serve as the primary factor in the expansion of the economics of the area. In fiscal year 1959 a definite plan report was prepared. Funds for start of construction were provided in the 1960 Public Works Appropriation Act as approved Sept. 10, 1959. The general investigation funds for fiscal year 1960 were used pending the availability of the construction allotment.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
ADVANCE PLANNING—continued							
Region 2:							
Washoe project (initial phase)	Nevada and California.	$1,605,591	$1,502,346	$103,245			The Washoe project located in eastern California and western Nevada, will provide supplemental irrigation water to 60,460 acres of land in need of a dependable late season water supply and a full supply for 5,100 acres of presently undeveloped arable land. Control of the high spring runoff will reduce flood damage and with project drainage will improve 30,900 acres of presently waterlogged land. The project also will produce 28,000 kilowatts of hydroelectric power greatly needed in western Nevada. The funds for fiscal year 1960 will be used to continue the detailed preconstruction studies but beginning in fiscal year 1961, this work will be financed from the "Construction and rehabilitation" appropriation.
Region 5:							
Canadian River project	Texas	509,994	470,190	39,804			Project will consist of a multipurpose reservoir on the Canadian River near Borger, Tex., and an aqueduct system to deliver municipal and industrial water to several cities in northern Texas. Detailed preconstruction studies were interrupted in 1954 by a decision by local interests to explore the possibility of proceeding with private financing. These efforts were unsuccessful and the local interests have since requested Federal development under the original authorization and have contributed funds toward completing the preconstruction work. Vol. I of a definite plan report, exclusive of the financial analysis portion, was prepared in draft orm in 1954. The report will be revised and completed, in light of changed economic conditions and recent developments, in fiscal year 1960.
Lower Rio Grande rehabilitation project: La Feria division	do	39,010	26,510	12,500			This project, located in Cameron County in the lower Rio Grande Valley, was authorized by act of Sept. 22, 1959. It will involve rehabilitation of the existing facilities to insure a dependable water supply for 26,660 acres of land. The local interests have contributed
							$12,500 for detailed preconstruction studies leading to

							$12,500 for detailed preconstruction studies leading to completion of the definite plan report early in fiscal year 1961.
Region 7:							
Trinidad project	Colorado	226,387	199,979	26,408			Investigation of irrigation aspects of a multiple-purpose dam and reservoir authorized for construction by the Corps of Engineers. The project is urgently needed to provide protection from a serious and long standing flood problem and for regulation and conservation of waters of the Purgatoire River for more beneficial and efficient irrigation use. A definite plan report is to be completed in fiscal year 1960 on the irrigation phase. Continuation of negotiations and discussions with the local interests after fiscal year 1960 will be financed from the "Construction and rehabilitation" appropriation.
Subtotal, advance planning		2,681,867	2,498,262	183,605	(1)	(1)	
INVESTIGATIONS OF EXISTING PROJECTS							
Region 2:							
Orland project	California	25,000			$25,000		East Park Dam of the Orland project located in Glenn and Tehama Counties was constructed prior to 1910, when only meager rainfall and runoff records were available. Analysis of 50 years of records has shown the serious inadequacy of the present spillway to handle potential flood inflows. This study is needed to determine proper method and cost of providing sufficient spillway capacity at East Park Reservoir.
Region 4:							
Grand Valley project, Orchard Mesa division.	Colorado	10,000			10,000		Most of the facilities of the Orchard Mesa division, which is located in the vicinity of Grand Junction, Colo., have been in operation for many years. The canals have deteriorated to the point that it is estimated some 30 percent of the water delivered to the system is lost through seepage. This has created a serious and progressively worsening drainage problem. In addition, there is a continuing danger of canal failure. To protect the Government's investment in the division, an investigation is to be made in fiscal year 1961 to develop plans for rehabilitation and betterment program to correct this situation.
Uncompahgre project	do	26,234	1,771	24,463			Project is located in Montrose and Delta Counties in west-central Colorado. Investigation to determine rehabilitation and betterment needs, prepare plans for structures to be renovated, prepare economic and repayment studies, conduct negotiations with the water users, and prepare a rehabilitation and betterment report in fiscal year 1960.

[1] Beginning with fiscal year 1961 it is proposed that advance planning work be financed from the "Construction and rehabilitation" appropriation. A fund requirement of $254,000 for fiscal year 1961 is justified for this activity under that appropriation.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
INVESTIGATIONS OF EXISTING PROJECTS—continued							
Region 5:							
Vermejo project	New Mexico	$7,800		$7,800			Feasibility investigation of a plan for modification of the existing Vermejo Diversion Dam. The existing dam, which was constructed about 1914, is of questionable structural stability, and has its crest about 2 feet lower than required to permit diversion of flows to the capacity of the main canal. Fiscal year 1960 funds would be used to initiate and complete a study of the feasibility of plans for raising the crest of the dam 2 feet by modifying the existing dam, or by replacing the existing dam with a new structure.
Region 6:							
Milk River project	Montana	75,466	$63,937	1,529		$10,000	Reports on field reclassification of class 5 lands in Malta, Glasgow, and Chinook divisions, as provided in Public Law 402, 82d Cong., 2d sess., will be completed in fiscal year 1960. Investigation to determine the cost of increasing the storage capacity of Fresno Dam and Reservoir is scheduled after fiscal year 1961.
Riverton project	Wyoming	74,000	63,800	4,068	$3,300	2,832	This investigation is required to enable compliance with art. 5B on repayment contract No. 14-06-600-67 requiring disposition of 9,474 acres of class 5 lands in Midvale Irrigation District prior to 1962.
Shoshone project	do	43,608	38,985	2,632	700	1,291	Investigations required to enable compliance with art. 12 of the repayment contract which provides that applications for the disposition of class 5 land (8,043 acres) shall be filed by the 10th anniversary of the contract or October 1959, and final disposition made within 5 years thereafter.
Subtotal, investigations of existing projects		262,108	168,493	40,492	39,000	14,123	
ALASKAN INVESTIGATIONS							

ALASKAN INVESTIGATIONS							
Alaska reconnaissance		100,000	68,108	4,342	1,500	26,050	Funds programed to accomplish reconnaissance investigations, studies, etc., on items of general nature or items which cannot be foreseen at this time and scheduled separately.
Chakachamna project		280,000			80,000	200,000	Chakachamna project, located on Cook Inlet about 80 miles west of Anchorage, affords an opportunity for the development of a source of low cost hydroelectric power for utilization within the Cook Inlet Basin. Studies are needed to determine the value of this project as an alternate source of low cost power to serve commercial and industrial needs.
Devil Canyon project		725,000	538,720	120,985		65,295	Devil Canyon project, located on the Susitna River north of Anchorage, is a potential source for a large block of power (450,000 kilowatts ultimate) that could serve the railbelt area from Seward to Fairbanks. Ample available low cost energy would stimulate and afford an opportunity for industrial development and related growth throughout this section of Alaska.
Matanuska Valley project		105,000	8,621	925	1,500	93,954	Studies are underway, in cooperation with the U.S. Department of Agriculture and the Alaska Agriculture Experiment Station in conjunction with the Soil Conservation Service, to determine crop yield benefits that may be derived through irrigation as a basis for establishing feasibility for developing an irrigation system to serve the Matanuska area near the city of Palmer.
Snettisham project		246,224	102,224	122,000	22,000		A prerequisite to the establishment of industry within the Juneau area is sufficient available electrical energy. Snettisham project, located about 28 airline miles southeast of Juneau, would bring about development of such a source of power. The U.S. Forest Service has under sales contract in the area some 7,500,000,000 board feet of timber for paper pulp and other wood products. Development of a newsprint mill and the mining of local deposits of minerals are dependent on the availability of a source of low cost electrical energy, such as could be developed at the Snettisham project. A feasibility report was completed early in fiscal year 1960 on the Long Lake-Crater Lake division and a similar report will be completed on the Speel River division in fiscal year 1961.
Vee project		460,000			140,000	320,000	The study of Vee project, located on the Susitna River northeast of Anchorage, is important to the overall development on the Susitna River above Devil Canyon. Information is needed to evaluate the site's suitability for a dam for upstream storage purposes, and to determine its ultimate contribution in the development of the Susitna River for hydroelectric power production.

Schedule of general investigations program, fiscal years 1960 and 1961—Continued

Program item	State	Total estimated cost	Cost to June 30, 1959	Fiscal year 1960 program	Fiscal year 1961 estimate	Balance to complete investigations	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
ENGINEERING AND ECONOMIC INVESTIGATIONS—Continued							
ALASKAN INVESTIGATIONS—continued							
Stream gaging and sediment sampling		$100,000	$35,986	$4,625	$5,000	$54,389	Funds programed to provide needed stream gaging and sediment sampling stations on lakes, streams, and rivers of Alaska.
Other projects, Alaska		1,444,000	35,597			1,408,403	Studies to be initiated or resumed after fiscal year 1961.
Subtotal, Alaskan investigations		3,460,224	789,256	252,877	250,000	2,168,091	
Total, Bureau of Reclamation		87,092,522	34,390,914	5,184,992	4,656,447	42,860,169	
Transfers to Fish and Wildlife Service		4,395,000		195,000	200,000	4,000,000	These funds will be transferred to the Fish and Wildlife Service for studies by that agency of the effect on fish and wildlife resources of water conservation developments of the Bureau of Reclamation under the Fish and Wildlife Coordination Act as amended in 1958. This will include potential Bureau projects under investigation as well as authorized projects awaiting construction funds or under construction. The funds for fiscal year 1961 will be utilized to conduct detailed studies of approximately 33 Bureau of Reclamation projects.
Total		91,487,522	34,390,914	5,379,992	4,856,447	46,860,169	
Service facilities			391,677	−36,421	−9,745	−345,511	Fiscal year 1961 amount represents the net of acquisition of service facilities and charges to specific investigations.
Stores			68,761	−2,448	−2,511	−63,802	Fiscal year 1961 amount represents the net of acquisition of stores and charges to specific investigations.
Transfers, credits, and other expenditures.		−3,494,743	−3,324,596	−174,132	−63,149	67,134	Fiscal year 1961 represents reimbursements for work performed for other Federal agencies, transfer of equipment and goods which do not require funds, etc.
Total expenditures		87,992,779	31,526,756	5,166,991	4,781,042	46,517,990	
Undelivered orders			82,334	−46,270	−27,055	−9,009	Fiscal year 1961 amount represents net change in obligations for goods and services on order but not yet re-

Undelivered orders			82,334	−46,270	−27,055	−9,009	Fiscal year 1961 amount represents net change in obligations for goods and services on order but not yet received.
Total obligations		87,992,779	31,609,090	5,120,721	4,753,987	46,508,981	
Engineering and economic investigations:							
Reconnaissance		3,282,000	250,761	358,629	448,987	2,223,623	
Basin surveys		12,849,668	9,105,014	491,181	290,920	2,962,553	
Project investigations		60,640,947	20,130,872	3,739,038	3,274,540	33,496,497	
General engineering and research planning studies.		2,240,708	1,448,256	119,170	103,000	570,282	
Engineering methods and materials research.		1,675,000			250,000	1,425,000	
Total, engineering and economic investigations.		80,688,323	30,934,903	4,708,018	4,367,447	40,677,955	
Advance planning		2,681,867	2,498,262	183,605			
Investigations of existing projects		262,108	168,493	40,492	39,000	14,123	
Alaskan investigations		3,460,224	789,256	252,877	250,000	2,168,091	
Subtotal, Bureau of Reclamation		87,092,522	34,390,914	5,184,992	4,656,447	42,860,169	
Transfers to Fish and Wildlife Service		4,395,000		195,000	200,000	4,000,000	
Total		91,487,522	34,390,914	5,379,992	4,856,447	46,860,169	

Itemization of estimate, general investigations, Bureau of Reclamation

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing:			
Total obligations	$5,041,949	$4,753,987	−$287,962
Comparative transfers to other accounts	164,142		−164,142
Unobligated balance brought forward	−379,712	−12,435	+367,277
Advanced from Reclamation trust funds	−169,822	−103,987	+65,835
Unobligated balance carried forward	12,435	12,435	
Appropriation (new obligational authority)	4,668,992	4,650,000	−18,992
Object classification:			
01 Personal services	4,000,782	3,784,237	−216,545
02 Travel	215,197	197,670	−17,527
03 Transportation of things	13,531	21,503	+7,972
04 Communication services	40,669	38,965	−1,704
05 Rents and utility services	13,622	10,885	−2,737
06 Printing and reproduction	50,230	57,435	+7,205
07 Other contractual services	30,934	43,114	+12,180
Services performed by other agencies	285,621	224,291	−61,330
08 Supplies and materials	97,657	90,179	−7,478
09 Equipment	39,605	40,461	+856
11 Grants, subsidies, and contributions	247,518	240,409	−7,109
13 Refunds, awards, and indemnities	3,549	2,335	−1,214
15 Taxes and assessments	3,034	2,503	−531
Total obligations	5,041,949	4,753,987	−287,962

General investigations—Explanation of difference between obligations in U.S. budget (itemization of estimate) and congressional justification

	Obligations	
	1960	1961
Itemization of estimate	$5,041,949	$4,753,987
Change in contributions:		
From $169,822 to $186,330	16,508	
Comparative transfer to "Construction and rehabilitation" not reflected in congressional justification	164,142	
Unobligated balance as of June 30, 1959, of advances to the Chief Engineer, Denver, Colo., and centralized project activities in the regional offices not reflected in the congressional justification	−101,878	
Congressional justification	5,120,721	4,753,987

Evaporation Control

Chairman Hayden. Now, what have you been doing in the current year in the way of research to control evaporation losses?

Mr. Dominy. Yes. I would like to have Assistant Commissioner Bennett give you a brief report on that, Mr. Chairman.

Chairman Hayden. Give us that, and how much you have in your 1961 budget for this program.

Mr. Bennett. Yes, Mr. Chairman.

We have been doing some work in this field over the past 2 or 3 years. Our 1961 request for research funds—which, incidentally, we are asking that $250,000 be put in the GI item as nonreimbursable—includes $100,000 for research on the problem of reservoir evaporation of which $56,000 would be in the nonreimbursable category. We did complete the task in fiscal year 1959 on Lake Hefner, Okla. It showed us that it was probably a useful thing to do, to enter into this type of work. What work we were able to do there

showed an average savings in evaporation losses of about 9 percent. Now, that is relatively low compared with what we have been finding in the laboratory, and in comparison with what some other countries are finding. The Australians, for example, we are told, are finding that they can prevent something in the order of 40 percent of evaporation losses.

A very curious thing seemed to develop here. Some very preliminary information which we have indicates that the Australians are getting that much prevention because their films are not being eaten by bacteria in their water. In this country apparently there is a bacteria that eats the film. And the Australians apparently do not have that problem. That seems to be one of the reasons for it. However, as I say, it is a very tentative conclusion and has not yet been proven.

But those are the kind of things that we must find out about, not only how much can you save, but how do you save it, what is the best material to use, and how should those materials be applied.

We have recently entered into a contract with the University of Montana whereby they would help us in this work. We are negotiating now proposed contracts with Arizona State College and with the University of Arizona.

We have underway some work on a small arm of Boulder Basin in which we are trying to determine some of the wind effects on the films. We are working with the State and the Department of Agriculture on lakes within Arizona that are well suited to test this sort of thing.

Chairman HAYDEN. We have a very high rate of evaporation there.

Mr. DOMINY. You certainly do, all through the Southwest.

Mr. BENNETT. All in all, we think this is a place where there is great opportunity to really create new sources of water. And we are pushing ahead with that as fast as we can within our budgetary limit.

HYDROLOGICAL STUDIES, LOWER COLORADO RIVER BASIN

Chairman HAYDEN. There is another question I want to ask about. Are you familiar with the present proposal for the Geological Survey for certain hydrological studies in the Lower Colorado River Basin?

Mr. PALMER. Yes, Mr. Chairman, we are. We have worked with them, as you well know, over the years in quite a number of cooperative endeavors. They do much of the stream gaging work, utilized by the Bureau, in fact they work with us very closely on quite a wide variety of related subjects.

Chairman HAYDEN. Now, there is a question that I would like to have cleared up. It is my understanding that under existing statutes and regulations that the management of this stretch of the river is under the responsibility of Bureau of Reclamation. Does it propose any studies?

Mr. DOMINY. Yes, among the purposes of the Colorado River Front Work and Levee System Act of June 28, 1946, are those of conducting investigations and studies in connection with the controlling of the Colorado River and rectifying and modifying its channel. We agree with you that the Colorado River is one river that is operated by the Bureau of Reclamation.

We have the principal regulatory structures and control structures on that river that have been built to date, and those that are under construction are Bureau facilities. And we certainly don't believe that the Geological Survey has any desire or intention of conflicting or interfering in any way or attempting to duplicate in any way those functions that the Bureau of Reclamation is performing.

Chairman HAYDEN. What phase of the Geological Survey proposal is most needed by the Bureau of Reclamation in the management of the river?

Mr. DOMINY Mr. Palmer will comment on that, sir.

Mr. PALMER. We have felt for a long time the need of more information on the underground aquifers of the Lower Colorado River Basin.

No comprehensive analysis of the ground water conditions in the lower basin of the main stream area has ever been made. It is that data be collected on the ground water conditions, especially for use in future studies of utilizing the ground water aquifers to meet part of the water supply demand under restricted operating conditions. We welcome this study and will make available many well logs, depth to ground water measurements, and results of chemical analyses on ground water samples collected over much of the area in connection with our drainage programs on operating projects. Also the proposed study of evaporation from water surfaces is needed and should be of value in connection with the current Bureau studies on reservoir evaporation reduction about which Mr. Bennett commented.

PHREATOPHYTES

Chairman HAYDEN. I was going to ask you about the control of phreatophytes. Are you cooperating with the Survey in that matter?

Mr. PALMER. We are, and we propose to continue to cooperate with them very closely, although there is in our budget an item that we have identified for strictly Bureau work in that field in the lower reaches of the Colorado River.

Chairman HAYDEN. What is the nature of these studies?

Mr. PALMER. This is a reconnaissance study of the feasibility of salvaging water for beneficial use by the eradication of phreatophytes or by other means in the bottom lands along the river between Davis Dam and the international boundary. In other words, the amount of water that is consumed by the phreatophytes, the depletion of the stream by phreatophytic growth, and so forth.

Chairman HAYDEN. In your opinion, should these proposed studies by the Geological Survey be financed from Bureau appropriations or from the direct appropriations of the Survey? What is the best way to do it?

Mr. DOMINY. We wouldn't have any strong feeling either way on that as long as the programs are coordinated. Some of the studies initially proposed by the Geological Survey would have duplicated investigation proposed in our lower Colorado River water salvage project and Lower Colorado River Basin general investigations. However, the proposed work of both agencies has now been reviewed by the Department and will be clearly coordinated to avoid duplication.

Chairman HAYDEN. I will include in the record a letter addressed to Senator Kuchel by Under Secretary Bennett concerning this matter.

(The letter referred to follows:)

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., March 18, 1960.

Hon. THOMAS H. KUCHEL,
U.S. Senate, Washington, D.C.

DEAR SENATOR KUCHEL: This is in reply to your letter of February 22, 1960, concerning investigations in the lower part of the Colorado River Basin by the Geological Survey and the Bureau of Reclamation.

The Geological Survey has recommended additional studies in the Colorado River Basin concerning the use and management of mainstream waters and ground waters of that section of the river downstream from Davis Dam. As you are aware, there is a close relationship between the work of the Bureau of Reclamation and Geological Survey. Therefore, the investigations proposed by Geological Survey are being carefully coordinated between the two agencies to avoid duplication.

Water management of the Colorado River is accomplished by the Bureau of Reclamation in accordance with the Boulder Canyon Project Act and Adjustment Act, related legislation, rules and regulations, and various water and power contracts relative thereto, including the Mexican Water Treaty. Data on water management are maintained by the Bureau of Reclamation and are published in the Geological Survey water supply papers.

There is an urgent need for the comprehensive analysis of the ground-water conditions in the lower basin of the mainstream area as proposed by Geological Survey. A number of investigations and reports on ground-water conditions, as related to project drainage, have been prepared for specific areas by Geological Survey, Bureau of Reclamation, special consultants, and various water users' organizations. Also, ground-water observation wells and piezometers have been installed and records maintained on Reclamation projects in the lower basin. All of these data need to be brought together by Geological Survey and supplemented as necessary to provide a comprehensive analysis for the lower basin, particularly as it relates to utilizing ground water to meet part of the water supply demand under restricted operating conditions.

The proposed study by Geological Survey of evaporation losses from Lake Havasu and from the Salton Sea would be of immediate value not only in the total lower basin hydrologic analysis, but also in connection with the current Bureau studies on reservoir evaporation reduction by the use of monomolecular and similar films.

Published Bureau of Reclamation studies of the entire Lower Colorado River Basin have covered the period from 1913 through 1951, and present studies cover the period from 1952 through 1958, with a continuing program scheduled. The Bureau of Reclamation's "Report on Water Supply of Lower Colorado River Basin," dated November 1952 and the supplement of November 1953 include inflow-outflow water budgets for reaches between gaging stations on the Lower Colorado River and also for all stream sections between key points on all tributaries as well as the main stream of the Colorado River downstream from Lees Ferry. This was the so-called White Book used as an exhibit in the hearings before the special master in *Arizona* v. *California* suit in the Supreme Court. It appears the river balance sheet proposed by Geological Survey would duplicate a large portion of this report.

The Geological Survey and the Bureau of Reclamation are currently carrying on cooperative studies of water consumption by phreatophytes and related problems through the use of lysimeters located on bottom lands of the Gila River near Buckeye, Ariz. This work is under a 10-year memorandum of agreement between the two agencies, executed on May 4, 1959. We believe this work should be continued as a basis for determining unit values of consumptive use by native vegetation. Detailed consumptive use analyses and related diversion requirements were prepared by the Bureau for the irrigable lands on projects of the Lower Colorado River in connection with the Supreme Court suit *Arizona* v. *California*.

For over 20 years, the Bureau of Reclamation has carried on active channel management studies, including detailed retrogression surveys of the entire reach of the river from Hoover Dam downstream. Results of these studies have been published approximately every 2 years and the reports furnished interested agencies and individuals. The latest of these reports, entitled "Report on Compre-

hensive Plan, Colorado River Channelization, Palo Verde and Cibola Valley Divisions," will be available for distribution soon. These studies and related river rectification work have been accomplished under authority of the Colorado River Front Work and Levee System Act of June 28, 1946.

In summary, the Bureau of Reclamation as the Federal agency charged with operation of the Lower Colorado River, has been operating the river and compiling hydrologic information on river operations with the aid of the Geological Survey for many years.

The Geological Survey has aided the Bureau of Reclamation in obtaining basic data required for operation of the river and can contribute in the future by making additional basic data studies in areas where more information is needed. The most urgent need is for additional ground water studies in the vicinity of Yuma along with studies to determine the evaporation losses from Lake Havasu and the Salton Sea. Careful coordination of the activities of the two agencies to avoid duplication will be continued.

Sincerely yours,

ELMER F. BENNETT,
Under Secretary of the Interior.

CHIKASKIA PROJECT

Chairman HAYDEN. I would like to ask about the Chikaskia project investigation.

I will include in the record a letter addressed to Senator Kerr from Mr. William R. Hellen, manager of the Blackwell, Okla., Chamber of Commerce, pertaining to funds for the continuation of the Chikaskia project investigation.

(The letter referred to follows:)

BLACKWELL CHAMBER OF COMMERCE,
Blackwell, Okla., March 16, 1960.

Senator BOB KERR,
Senate Office Building, Washington, D.C.

DEAR SENATOR: In talking with Mr. Barkley of the Bureau of Reclamation, I find that the appropriation for the Chikaskia Valley project was left out of the budget for the fiscal year of 1960 and 1961. We would greatly appreciate any effort that you might give in getting this reinstated. As you know, Blackwell this past year suffered two or three floods that caused extensive damage, and we feel that early construction of Corbin Reservoir in Kansas will not only have a tremendous value to the citizens of Blackwell but also to many farmers up and down the Chikaskia Valley. Our water resources committee and the board of directors of the Blackwell Chamber of Commerce solicit your help in this matter.

Kindest personal regards,

WM. R. HELLEN, *Manager.*

STATUS OF INVESTIGATION

Chairman HAYDEN. What is the status of the investigation?

Mr. DOMINY. I will have Mr. Palmer and Mr. Burnett answer questions on that.

Mr. BURNETT. On the Chikaskia project, there has been no uniformity of agreement among the local interests as to proceeding with this investigation. We prepared a reconnaissance report about 4 years ago, and they are studying that report. Just recently, at the instance of the city of Blackwell they had a meeting and it does look like the people are beginning to get interested and may want to proceed.

Until they show some concrete evidence that they are together, we would not expect to include any funds for work on the Chikaskia project.

Chairman HAYDEN. Very well.

MIDDLE GILA PROJECT INVESTIGATION

Chairman HAYDEN. On the Middle Gila project investigation, what is the status of that?

Mr. BURNETT. The draft of the report on the Middle Gila project has been completed in the regional office and will soon be circulated to the local interests for their consideration. Concurrently we are examining the railroad relocation around the site. We expect that the report will be completed in final form with the new railroad relocation in it around November of this year.

Mr. DOMINY. Mr. Burnett, I think the chairman would be interested in the problem we ran into there on this railroad relocation. We are not going to achieve as much savings as we anticipated by reason of the more stringent requirements of grade.

Mr. BURNETT. Yes. Originally the railroad gave us some criteria on which to plan the relocation, based on the loading pattern at that time, which provided for a 1-percent grade. This was somewhat steeper than the prevailing grade on the existing railroad location which has a river level gradient.

Since that time the railroad made a thorough study of what they could anticipate in the way of future carloadings and their traffic pattern, and as a result, they now anticipate that they will have a heavier load and more traffic than they have had in the past.

So in our relocation studies, they asked us to establish a grade at the existing gradient which was 0.68 percent, and as I recall, we are going to have a longer railroad and more cost.

So I am not sure that we will find that we will get the savings that we anticipated under the original relocation.

Mr. PALMER. Mr. Chairman, the basic reason for the increase in cost and the changing position of the company of this grade was because of the relocation of smelters and opening new ore deposits, they built some new facilities in there.

Chairman HAYDEN. That is right, there has been a big development in there.

Mr. PALMER. And it reversed the loading pattern, as Mr. Burnett pointed out.

Chairman HAYDEN. Now, how is this included in the budget for this fiscal year?

Mr. PALMER. For this year 1961?

Chairman HAYDEN. Yes.

Mr. PALMER. $10,000 in all.

Chairman HAYDEN. Is that enough?

Mr. PALMER. In all probability, because of this difficulty that has been encountered, we are going to be hard put to get along with that amount. We may be able to make adjustments within the 15-percent transfer rule, to handle it, but it now looks like we are going to have an increased cost on the Middle Gila investigation.

Chairman HAYDEN. If you need more money, will you tell us how much?

Mr. PALMER. We can give you now a tentative estimate, we think it might run as high as $20,000; we think we might need an additional $10,000 in fiscal 1961.

W. C. AUSTIN PROJECT

Chairman HAYDEN. Now we come to the W. C. Austin project. I have received a letter from Senator Kerr in which he advises the committee of a seepage and drainage problem that has developed on the W. C. Austin project. Are you familiar with that?

Mr. DOMINY. Yes, I am. I was there on the ground less than a month ago. And it is true that—and again, as you are quite familiar with, on all irrigation projects you have to provide some drainage to get water off the land as well as bring water to the land—and we have some quite serious problems developing in fairly localized areas on the W. C. Austin project.

It is complicated additionally by nonproject lands interspersed down through a section of the project where the farmers have actually farmed right across natural drainage ways. And at the moment it is difficult to assess exactly the source of this problem and what can be done about it. They are really seriously in need of an investigation program performed by trained geologists and drainage experts.

Chairman HAYDEN. Do you have the funds for that?

Mr. DOMINY. We do not because this is something that has come upon us rather unexpectedly, and has developed since our budget was formulated last fall.

Chairman HAYDEN. What would be a proper sum to expend for that purpose?

Mr. PALMER. We believe that the fiscal year 1961 requirements would be about $25,000 to inaugurate that investigation and carry it forward.

Chairman HAYDEN. Do you believe it is worthy of investigation immediately?

Mr. DOMINY. We think it is an emergency situation, Mr. Chairman.

(The letter referred to follows:)

U.S. SENATE,
Washington, D.C., April 12, 1960.

HON. CARL HAYDEN,
Chairman, Appropriations Committee,
U.S. Senate.

DEAR CARL: A very critical seepage problem has developed on the lands of the W. C. Austin multiple-purpose project at Altus, Okla., which was constructed by the Bureau of Reclamation.

Recently the Commissioner of Reclamation met with the directors of the irrigation district and this was one of the subjects discussed. Therefore, I am sure that Commissioner Dominy is acquainted with the seriousness of the situation.

I am advised that the method of procedure is first, to make a survey to determine the extent of the critically affected area; and, secondly, a means whereby it may be eliminated. I am also advised that such a survey would probably require 2 years and $50,000—$25,000 being required for the first year and $25,000 for the second year.

From information available to me, it would seem that this is an emergency which should be tackled as soon as possible. Therefore, I would appreciate it if you would request information from the Bureau of Reclamation about this situation and, if my information is correct, that $25,000 be made available for the survey to commence in the fiscal year 1961.

With kindest personal regards, I am

Sincerely yours,

ROBERT S. KERR.

TEXAS BASIN PROJECT

Chairman HAYDEN. Now, for the current fiscal year, $667,000 was made available for the Texas Basin project investigation. This estimate includes $458,000 to continue this investigation in 1961. Would you comment on this reduction and just what will be its effect?

Mr. DOMINY. I would like Mr. Palmer and Mr. Burnett to handle that.

Mr. BURNETT. The budget request for 1961 in the amount of $458,000 came about because there was probably incomplete coordination between the activity of the Texas Study Commission, our agency, and possibly the Bureau of the Budget. We originally programed $658,000 for this investigation and anticipated that additional special work required by the Texas Study Commission would be requested by it and the commission would provide the funds for us to do that work as they are doing in this current fiscal year.

In addition to that special work that we would do for them, that they would finance, we also, of course, are required under the act establishing the Texas Study Commission, to work with that agency and to provide them with much additional information developed in our normal program. It appears that in formulating the two budgets, it was thought that the Texas Study Commission would provide us from their funds all the money that we would need to do all of the work involved in their program, which supposedly would include the work we would be doing normally, but providing to them. And so our budget request was reduced to $458,000 although I now understand the Study Commission budget was not increased to cover the reduction in our budget.

Now, that makes it very difficult for us to complete our program on the Texas basins project within the schedule that we have established. We anticipate concluding that study in fiscal 1963, expecting that the Texas Commission would meet their goal of having an overall plan by the end of fiscal year 1961, at which time we could then do a complete feasibility study and have a report suitable for congressional consideration.

With the amount we have in here now, we will have to seriously curtail our engineering, economic, and other technical work in connection with the project. We would be forced into a staff reduction of highly trained people, which would, in turn, handicap us in the next year, if we got the money we needed and had to expand again.

Chairman HAYDEN. Let me see if I understand this situation. The Texas Study Commission is a Federal agency financed from its own appropriation. Is that correct?

Mr. DOMINY. Yes, sir.

Chairman HAYDEN. And you are cooperating with the Commission in the preparation of a report on the proposed Texas Basin project.

Mr. DOMINY. That is correct, Mr. Chairman.

As Mr. Burnett explained, we think the basic reason for this adjustment was a lack of coordination, and I am not of the

opinion that the Bureau of the Budget intended a sharp reduction in our total program. We thought—and I think the Budget Bureau thought—that between this budget and what the Texas Study Commission would have to advance to us, that we could keep our program at the current levels. But we now find that that is not the case, and if this budget stands at the $458,000 level, we will have to reduce our staff; and then, if we are back on our schedule for fiscal year 1962, we would have to be recruiting untrained people to try and replace them. And this gives us considerable concern.

Chairman HAYDEN. Would it be advisable for this committee to increase the amount for this investigation?

Mr. DOMINY. I think it would be highly desirable on this item.

Chairman HAYDEN. Very well.

Are there any other items in the planning program on which you could use additional funds?

ANIMAS-LA PLATA PROJECT

Mr. DOMINY. Yes, sir. There are three additional items in the general investigation program which could use additional financing. The first of these is the Animas-La Plata project for which we have programed $130,500 for fiscal year 1961. The Secretary's coordinated report on the San Juan-Chama and Navajo irrigation projects is under review in the Executive Office of the President and authorizing legislation has been introduced in Congress. Because of the close relationship of these two projects to the Animas-La Plata project it is essential the investigation of the Animas-La Plata project be expedited as much as possible. It would be physically possible to complete a draft of the feasibility report on that project by June 30, 1961, but, to meet that goal, an additional $40,000 is needed in fiscal year 1961.

LAHONTAN BASIN SURVEY

The second item is the Lahontan Basin survey for which we are requesting $2,000 in fiscal year 1961 to finance the cost of the Federal representative on the California-Nevada Compact Commission. We have been advised the Commission intends to be much more active next fiscal year and, if the Federal representative is to participate fully, an additional $2,000 will be required next fiscal year.

UMATILLA PROJECT

The third item is the Birch Creek diversion unit of the Umatilla project in Oregon. We are requesting $10,000 in fiscal year 1961 to initiate this investigation with the objective of completing the report in fiscal year 1963. The purpose of this study is to determine the feasibility of diverting water from Birch Creek into the existing McKay Reservoir of the Umatilla project. We recently received an application from the Teel Irrigation District for a loan under the Small Reclamation Project Act for a project which is dependent upon storage in McKay Reservoir. Action on this loan application cannot be completed until the answers are available from the Birch Creek diversion study. An additional $28,000 on this study in fiscal year 1961 would permit us to complete it early in fiscal year 1962, thereby minimizing the delay on the loan application.

O'NEILL UNIT OF MISSOURI RIVER BASIN

In the Missouri River Basin planning program there are two items on which we also could use additional funds. The first item is the O'Neill unit for which we have requested $20,661 in fiscal year 1961 to complete the report. Recent studies have indicated it would be very desirable to expand the unit to include an additional 8,600 acres of land. An additional $30,000 in fiscal year 1961 on this study would permit us to complete the report by the end of the fiscal year whereas it otherwise would be delayed until late in fiscal year 1962.

OAHE UNIT

The other item in the Missouri River Basin was discussed earlier in the hearings. It is the Oahe unit investigation. A report to demonstrate the feasibility of this unit is to be completed by the end of the current fiscal year for release to the States and local interests. The fiscal year 1961 program includes $20,000 to cooperate with those local interests in formulating their opinions. The plan presented in that report contemplates pumping water from the James River into an enlarged Lake Byron which would be used for irrigation, flood control, and municipal and industrial purposes. Considerable additional detailed planning will be required to prepare the Oahe unit for start of construction, however, and in view of the pressing needs of the city of Huron for municipal and industrial water, consideration has been given to the possibility of constructing Lake Byron in advance of the remainder of the Oahe unit. A feasibility study of this proposal could be made in fiscal year 1961 if $95,000 of additional funds were made available for that purpose.

ADVANCE PLANNING

Chairman HAYDEN. I note that funds for advance planning of authorized projects are carried under the "Construction and rehabilitation" appropriation for fiscal 1961. In the past, funds for this purpose have been included in the "General investigations" program. Please comment on this change in financing.

Mr. PALMER. Beginning this year, we have separated "Advance planning" and taken it out of the "General investigations" account and moved it over to the "Construction and rehabilitation" account.

We believe this presents to the Congress, and gives us, a better breakdown and better control over the funds for the purpose for which they are actually used. Advance planning being the actual initiation of construction on authorized projects, we believe it belongs with the construction schedule. So beginning with this year, we have made that major change in the format, and I believe it is logical and that it will continue from this time on.

GENERAL INVESTIGATIONS

FOREIGN CURRENCY PROGRAM

Chairman HAYDEN. Now under the heading of "General investigations foreign currency program," the budget includes a request of $4,957,000 for the purchase of foreign currencies for reclamation and irrigation studies in foreign countries.

The justifications will be included in the record.
(The justifications follow:)

BUREAU OF RECLAMATION

General Investigation (Special Foreign Currency Program)

EXPLANATION OF NEW LANGUAGE, FISCAL YEAR 1961

The Agriculture Trade Development and Assistance Act of 1954, as amended, authorizes the use of surplus foreign currency proceeds derived from the sale of surplus agricultural commodities, for the conduct and support of scientific research activities and programs between the United States and other countries.

A number of the countries in which the United States has acquired such currencies surplus to its normal requirements have facilities for, and have performed research work in fields in which the Bureau of Reclamation is engaged. The Bureau feels that such scientific facilities and know-how as are available in certain foreign laboratories would be of great assistance to it in the solution of many of its problems. To avail itself of the research facilities in those countries where foreign currency credits are available the Bureau proposes this new language, under which work supplemental to its domestic activities will be conducted.

The requested language follows:

GENERAL INVESTIGATIONS (SPECIAL FOREIGN CURRENCY PROGRAM)

For purchase of foreign currencies which accrue under title I of the Agricultural Trade Development and Assistance Act of 1954, as amended (7 U.S.C. 1704), for the purposes authorized by section 104(k) of that Act, to remain available until expended, $4,957,000, of which not less than $4,522,000 shall be available to purchase currencies which the Treasury Department shall determine to be excess to the normal requirements of the United States: Provided, That this appropriation shall not be used for the purchase of currencies available in the Treasury for the purposes of section 104(f) of said Act unless such currencies are excess to the normal requirements of the United States.

General Investigations (Special Foreign Currency Program)

Summarized financial data

Appropriation, fiscal year 1960	
Estimate of appropriation, fiscal year 1961	$4,957,000

JUSTIFICATION

Authorization.—Section 104(k) of the Agricultural Trade Development and Assistance Act of 1954, as amended (7 U.S.C. 1704(k),) authorizes the use of foreign currency proceeds from sales of surplus agricultural commodities, "To collect, collate, translate, abstract, and disseminate scientific and technological information and to conduct and support scientific activities overseas including programs and projects of scientific cooperation between the United States and other countries * * *." Under this program $4,957,000 is requested for expenditure during the next 3 years for research and associated scientific activities related to the Bureau's programs. Of this amount $1 million would be expended in fiscal year 1961. A tabulation of the proposed program to be conducted with the foreign currencies is given below by country. Amounts are shown in their U.S. dollar equivalents.

Country	3-year program	Fiscal year 1961 program	Balance
India	$876,000	$198,500	$677,500
Israel	238,000	54,100	183,900
Pakistan	631,000	143,000	488,000
Poland	1,131,000	200,000	931,000
Spain	435,000	98,500	336,500
UAR (Egypt)	456,000	83,000	373,000
Yugoslavia	1,076,000	184,900	891,100
Administrative and travel	114,000	38,000	76,000
Total	4,957,000	1,000,000	3,957,000

Work proposed, fiscal year 1961, $1 million.—A summary of the amounts proposed to be used in fiscal year 1961, and general fields within which specific projects might be undertaken, are as follows:

India, $198,500; Pakistan, $143,000.—To be used for studies of canal gradients through different types of soils; investigation of the use of jute fibers as a reinforcing material in asphalt canal linings; research in connection with the control of evaporation from open water surfaces; and studies of electrical treatment of soils for stabilization and drainage and electroreclamation of saline-alkali soils.

Israel, $54,100.—For studies in weed control, sedimentation (both in theory and application), and control of evaporation from open water surfaces.

Poland, $200,000.—For a survey of protective coating methods; compilation and evaluation of statistics on concrete structures; studies on settlement of structures; streamflows, and sediment transport in streams and pipes; and investigations of use of precast concrete forms for dam construction.

Spain, $98,500.—To be used for studies in soil mechanics including properties of and testing of expansive clays; determination of energy of submerged water jets; and measurements of rock properties in place.

Yugoslavia, $184,900.—To be used for studies in soil mechanics, including effect of crytal orientation on strength of rocks, and other measurements of rock properties; investigation of the use of precast concrete forms for dam construction; and hydraulic studies of aeration during flows through vertical shafts, closed conduits, and open channels.

UAR (Egypt), $83,000.—To be used for research in connection with studies of sedimentation and corrosion problems; and investigations concerning settlement of structures.

Administrative and travel, $38,000.—In addition to the $38,000 "Administrative and travel" item in fiscal year 1961, $50,000 in U.S. funds has been included under "General engineering and economic investigations, engineering methods and materials research" to cover expenses in support of the foreign currency program. The total estimated for 1961 is $88,000. An example of the use of these domestic funds would be the purchase of tickets for travel within the United States, to and from ports of embarkation.

Final determination of the research projects to be undertaken in each of the countries listed will be made through negotiations and agreement after funds in specific amounts are made available. In every case, the work to be done abroad with foreign currency funds will be supplemental and in addition to research projects performed in domestic laboratories of the Bureau of Reclamation or other Government agencies.

Related scientific activities to be conducted in the individual countries listed above are the preparation of bibliographies in scientific subjects of interest to the Bureau, technical study tours by Bureau employees, and attendance at international scientific meetings (when approved by the Department of State).

Itemization of estimate, general investigations, special foreign currency program, Bureau of Reclamation

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing: Total obligations		$4,957,000	+$4,957,000
Appropriation (new obligational authority)		4,957,000	+4,957,000
Object classification:			
02 Travel		84,000	+84,000
07 Other contractual services		4,843,000	+4,843,000
08 Supplies and materials		30,000	+30,000
Total obligations		4,957,000	+4,957,000

GENERAL STATEMENT

Chairman HAYDEN. Do you have a statement on this request?

Mr. DOMINY. Yes, Mr. Chairman. The Agricultural Trade Development and Assistance Act of 1954, as amended, authorizes the use of surplus foreign currency proceeds derived from the sale of surplus agricultural commodities for the conduct and support of scientific research activities abroad.

Some of the countries in which surplus currencies are available have facilities for research work in fields in which the Bureau of Reclamation is engaged in its domestic program. Use of these foreign facilities to supplement the Bureau's research programs in engineering methods and materials would advance the solution of many problems encountered in the domestic activities of the Bureau. The work would be done by contract.

Research will include studies in evaporation reduction, electroreclamation of saline soils, weed control, sedimentation, seepage control, soil and rock mechanics, streamflows, hydraulic problems, protective coatings, and concrete behavior.

We would propose a total program of $4,957,000, planned for a 3-year period starting in fiscal year 1961. In order to give continuity to the program we plan to obligate as much as possible of the $4,957,000 in fiscal year 1961. However, only $1 million of this would actually be spent in fiscal year 1961, and would be used in the following countries: India, Israel, Pakistan, Poland, Spain, Egypt, and Yugoslavia. A breakdown showing the amount to be spent in each country and the research to be performed by each is attached at the end of this state ment, and I would like to make that a part of the record.

Chairman HAYDEN. Yes.

(The information referred to follows:)

Bureau of Reclamation proposed foreign currency research program

Country	3-year program	Fiscal year 1961 program	Balance
India	$876,000	$198,500	$677,500
Israel	238,000	54,100	183,900
Pakistan	631,000	143,000	488,000
Poland	1,131,000	200,000	931,000
Spain	435,000	98,500	336,500
UAR (Egypt)	456,000	83,000	373,000
Yugoslavia	1,076,000	184,900	891,100
Administrative and travel	114,000	38,000	76,000
Total	4,957,000	1,000,000	3,957,000

WORK PROPOSED, FISCAL YEAR 1961, $1 MILLION

A summary of the amounts proposed to be used in fiscal year 1961, and general fields within which specific projects might be undertaken, are as follows:

India, $198,500

Pakistan, $143,000

To be used for studies of canal gradients through different types of soils; investigation of the use of jute fibers as a reinforcing material in asphalt canal linings; research in connection with the control of evaporation from open water surfaces; and studies of electrical treatment of soils for stabilization and drainage and electroreclamation of saline-alkali soils.

Israel, $54,100

For studies in weed control, sedimentation (both in theory and application) and control of evaporation from open water surfaces.

Poland, $200,000

For a survey of protective coating methods; compilation and evaluation of statistics on concrete structures; studies on settlement of structures; stream flows, and sediment transport in streams and pipes; and investigations of use of precast concrete forms for dam construction.

Spain, $98,500

To be used for studies in soil mechanics including properties of and testing of expensive clays; determination of energy of submerged water jets; and measurements of rock properties in place.

UAR (Egypt), $83,000

To be used for research in connection with studies of sedimentation and corrosion problems; and investigations concerning settlement of structures.

Yugoslavia, $184,900

To be used for studies in soil mechanics, including effect of crystal orientation of strength of rocks, and other measurements of rock properties: investigation of the use of precast concrete forms for dam construction; and hydraulic studies of aeration during flows through vertical shafts, closed conduits and open channels.

Administrative and travel, $38,000

In addition to the $38,000 "Administrative and travel" item in fiscal year 1961, $50,000 in U.S. funds has been included under "General engineering and economic investigations, engineering methods and materials research" to cover expenses in support of the foreign currency program. The total estimated for 1961 is $88,000. An example of the use of these domestic funds would be the purchase of tickets for travel within the United States, to and from ports of embarkation.

Final determination of the research projects to be undertaken in each of the countries listed will be made through negotiations and agreement after funds in specific amounts are made available. In every case, the work to be done abroad with foreign currency funds will be supplemental and in addition to research projects performed in domestic laboratories of the Bureau of Reclamation or other Government agencies.

Related scientific activities to be conducted in the individual countries listed above are: The preparation of bibliographies in scientific subjects of interest to the Bureau, technical study tours by Bureau employees, and attendance at international scientific meetings (when approved by the Department of State).

TREASURY CASH REQUIRED

Chairman HAYDEN. Now, the committee is interested in knowing how much cash out of the Treasury these programs will require.

Mr. DOMINY. We will need about $50,000 for Bureau of Reclamation appropriations for necessary expenses within the United States in administering this program.

Chairman HAYDEN. But abroad there would be no cash required, no cash expenditures?

Mr. DOMINY. Well, within the $50,000 would be such limited travel as wouldn't be paid by these credits. We don't propose to be using this for a lot of junkets abroad. It would be limited to such visits as would be necessary by our people to set up the contracts and get the research program outlined.

So it could be operated with very little appropriation to reclamation above and beyond these credits that are already available.

Chairman HAYDEN. This is all research and study; there is actually no construction involved in it?

Mr. DOMINY. No, sir; strictly research of those things that we think would be extremely helpful to us in augmenting basic research here in this country on items of great interest to reclamation.

THREE-YEAR PROGRAM

Chairman HAYDEN. Why is this presented in a 3-year program?

Mr. DOMINY. Well, any research program, Mr. Chairman, you recognize we couldn't accomplish anything if you set it up for 1 year. And we would need the assurance that we were going to have the continuity of a 3-year program in order to provide for continuing contracts over that period to accomplish anything.

Mr. BENNETT. I think we should add to, Mr. Chairman, that one of our problems here is that in fiscal 1961 these currencies will be so-called excess currencies, and we can obtain them. We don't know

whether they will be available in following years or not. But we have the funds this year, when we are assured of this continuity approach.

Chairman HAYDEN. That is to say you will enter into a 3-year contract.

Mr. DOMINY. Yes, sir.

Chairman HAYDEN. And you know they are available?

Mr. DOMINY. We know they are available, and we have been told that they are available in these countries beyond any other program like embassy support, and that sort of thing, that these moneys are used for generally——

Chairman HAYDEN. Thank you.

(Further statement of Mr. Dominy on foreign currencies follows:)

PROPOSED FOREIGN CURRENCY PROGRAM, FISCAL YEAR 1961

The Agricultural Trade Development and Assistance Act of 1954, as amended, authorizes the use of surplus foreign currency proceeds derived from the sale of surplus agricultural commodities for the conduct and support of scientific research activities abroad.

Some of the countries in which surplus currencies are available have facilities for research work in fields in which the Bureau of Reclamation is engaged in its domestic program. Use of these facilities to supplement the Bureau's research programs in engineering methods and materials would advance the solution of many problems encountered in the domestic activities of the Bureau. The work would be done by contract.

Research will include studies in evaporation reduction, electro-reclamation of saline soils, weed control, sedimentation, seepage control, soil and rock mechanics, stream flows, hydraulic problems, protective coatings, and concrete behavior.

A total program of $4,957,000 has been planned for a 3-year period starting in fiscal year 1961. In order to give continuity to the program, we plan to obligate as much as possible of the $4,957,000 in fiscal year 1961. However, only $1 million of this would actually be spent in fiscal year 1961, and would be used in the following countries: India, Israel, Pakistan, Poland, Spain, Egypt, and Yugoslavia. A breakdown showing the amount to be spent in each country and the research to be performed by each is attached at the end of this statement. (In addition, $50,000 would be provided from Bureau of Reclamation appropriations for necessary expenses within the United States in administering the program.)

The benefit to the Bureau would result primarily through acceleration of the Bureau's current research program in engineering methods and materials. Some new ideas and concepts should be forthcoming through the pursuit of basic research elements in which foreign scientists and engineers seem to be particularly talented. Some research would be in subjects that are of much interest but have been backlogged under the Bureau's program in the interests of maintaining a moderate and sustained research program. In all, much valuable data relating to Bureau engineering problems should be developed through the application of special talents and experiences of foreign countries. As with the Bureau's domestic research program, the benefits of foreign research will also accrue to others.

This program has the additional advantage of being financed at low cost to the Government. The appropriation herein requested will actually be credited to the CCC accounts, reducing the direct financing of CCC by that amount. With the possible exception of Spain, it also releases credits in the countries listed that would not otherwise be used. The Government thereby gains a two-fold financial advantage, plus the benefit of a research program of substantial benefit to the domestic work of the Bureau.

OPERATION AND MAINTENANCE

Chairman HAYDEN. For "Operation and maintenance," the budget estimate is $31,900,000. I will include the justification in the record.

(The justification follows:)

OPERATION AND MAINTENANCE—GENERAL STATEMENT

Summarized financial data

Fiscal year 1960:	
Appropriation	$28,402,725
Funds advanced by water users	3,816,789
Funds advanced by States and municipalities	170,457
Fort Peck continuing fund	900,000
Total obligations, fiscal year 1960	[1] 33,289,971
Fiscal year 1961:	
Appropriation	31,900,000
Funds advanced by water users	3,624,140
Funds advanced by States and municipalities	159,150
Fort Peck continuing fund	1,024,000
Total obligations, fiscal year 1961	36,707,290

[1] Excludes obligations from emergency funds in fiscal year 1960 for purchase of power requirements as a result of less than normal water year.

The fiscal year 1961 request is $3,497,275 above the fiscal year 1960 operation and maintenance appropriation. The principal part of the increase represents the requirement for replacements and additions, inclusion of an increase in the Columbia Basin project drainage construction program, and the inclusion in the operation and maintenance program of those facilities and projects on which construction is scheduled to be completed in fiscal year 1960.

The Bureau of Reclamation fiscal year 1961 program provides for operation and maintenance of 37 projects or divisions of projects; continuance of work on the Colorado River front work and levee system; soil and moisture conservation operations; and Halogeton control on Bureau lands. The latter three items are nonreimbursable. The appropriation estimate does not include funds for the Fort Peck project transmission system, operation and maintenance of which are financed from a revolving fund.

The number of projects given above includes the Yuma area projects, a consolidation of 5 projects as 1 project; the Minidoka area projects, a consolidation of 3 projects as 1 and the Missouri River Basin as 1 project, 23 units of which will be completed or partially completed and in operation and maintenance status during fiscal year 1961. Of the 36 projects (exclusive of Missouri River Basin project), 13 will be operated entirely with appropriated funds, 7 will be operated entirely with funds advanced by the water users, while 16 will be operated with a combination of appropriated and advanced funds.

As a permanent activity, the Bureau of Reclamation operates and maintains only power projects and power facilities and other reserved works of multipurpose projects. Completed irrigation facilities are turned over to water users organizations for operation and maintenance as rapidly as the necessary agreements can be consummated. Pending completion or until such agreements are executed, the systems are operated by the Bureau with appropriated or advanced funds. In fiscal year 1961, the Bureau of Reclamation will serve irrigation water to approximately 1,055,472 acres through distribution facilities operated and maintained with appropriated or advanced funds.

Under its program of power operations, the Bureau will operate and maintain directly or by contract during fiscal year 1961 (exclusive of Fort Peck) a total nameplate capacity of 5,201,550 kilowatts in 43 powerplants, an increase of 51,000 kilowatts over 1960, and approximately 9,814 circuit miles of transmission lines, an increase of approximately 683 circuit miles.

Of the appropriation requested, approximately 90 percent will be returned to the United States from power and irrigation revenues and revenues from the sale of municipal and industrial water. The balance, which is nonreimbursable and nonrevenue producing, is made up principally by two items, the Colorado River front work and levee system and the program for soil and moisture conservation operations.

The total appropriation requested for all operation and maintenance activities of the Bureau of Reclamation represents a minimum budget that will permit operation of the Bureau's electric facilities and delivery of irrigation water to the farms of all reclamation projects.

Operation and Maintenance

Appropriation allotments and funds advanced, fiscal year 1960 and fiscal year 1961

State	Project	Allotments			Funds advanced			Total project obligations		
		Actual, fiscal year 1960	Estimate, fiscal year 1961	Increase or decrease	Fiscal year 1960	Fiscal year 1961	Increase or decrease	Fiscal year 1960	Fiscal year 1961	Increase or decrease
Alaska	Eklutna	$268,000	$279,500	+$11,500				$268,000	$279,500	+$11,500
Arizona-California	Yuma area projects	233,900	344,270	+110,370	$305,955	$303,040	−$2,915	539,855	647,310	+107,455
Arizona-California-Nevada.	Colorado River front work and levee system.	1,476,234	1,885,930	+409,696				1,476,234	1,885,930	+409,696
	Parker-Davis	2,383,189	2,611,070	+227,881	160,000	150,000	−10,000	2,543,189	2,761,070	+217,881
Arizona-Nevada	Boulder Canyon	1,430,000	1,335,000	−95,000				1,430,000	1,335,000	−95,000
	Boulder City, Nev.	600,000		−600,000				600,000		−600,000
California	Cachuma	72,985	77,000	+4,015				72,985	77,000	+4,015
	Central Valley	5,943,067	6,101,000	+157,933				[1] 5,943,067	6,101,000	+157,933
	Kings River	1,460	1,500	+40		13,500	+13,500	1,460	15,000	+13,540
	Solano	54,982	57,600	+2,618				54,982	57,600	+2,618
Colorado	Colorado-Big Thompson	709,410	773,000	+63,590	[2] 196,395	201,000	+4,605	905,805	974,000	+68,195
	Grand Valley		59,500	+59,500					59,500	+59,500
	San Luis Valley	7,785	8,000	+215				7,785	8,000	+215
Idaho-Oregon	Boise	353,675	365,000	+11,325	68,000	59,000	−9,000	421,675	424,000	+2,325
Idaho-Wyoming	Minidoka area projects	1,354,593	1,880,000	+525,407	132,000	130,000	−2,000	1,486,593	2,010,000	+523,407
Montana	Hungry Horse	508,946	666,000	+157,054				508,946	666,000	+157,054
	Milk River	217,979	18,351	−199,628	34,000	32,000	−2,000	251,979	50,351	−201,628
Nebraska-Wyoming	North Platte	132,345	187,500	+55,155	[3] 115,700	103,000	−12,700	248,045	290,500	+42,455
New Mexico	Carlsbad	4,671	4,700	+29	9,100	10,300	+1,200	13,771	15,000	+1,229
	Middle Rio Grande	350,326	450,000	+99,674	[4] 1,000,000	[4] 1,000,000		1,350,326	1,450,000	+99,674
New Mexico-Texas	Rio Grande	398,982	421,000	+22,018	1,100,000	1,035,000	−65,000	1,498,982	1,456,000	−42,982
Oklahoma	W. C. Austin	2,190	2,600	+410	6,750	9,200	+2,450	8,940	11,800	+2,860
Oregon	Rogue River Basin, Talent division.	59,904	86,000	+26,096				59,904	86,000	+26,096
Oregon-California	Klamath	39,405	38,400	−1,005	131,284	142,100	+10,816	170,689	180,500	+9,811
Texas	Falcon	4,866	5,000	+134				4,866	5,000	+134
Utah	Provo River	19,317	23,750	+4,433				19,317	23,750	+4,433
Washington	Columbia Basin	4,964,896	6,600,000	+1,635,104	30,000	40,000	+10,000	4,994,896	6,640,000	+1,645,104
	Yakima	149,862	226,000	+76,138	544,000	403,000	−141,000	693,862	629,000	−64,862
Wyoming	Kendrick	269,556	349,000	+79,444				269,556	349,000	+79,444
	Riverton	111,910	112,000	+90				111,910	112,000	+90
	Shoshone	160,177	123,600	−36,577	4,400	4,400		164,577	128,000	−36,577
Various	Missouri River Basin project	5,214,730	5,737,500	+522,770	[5] 13,887	11,000	−2,887	[6] 6,128,617	[6] 6,772,500	+643,883
	Soil and moisture	836,237	999,229	+162,992	[7] 11,975	[7] 9,150	−2,825	848,212	1,008,379	+160,167
	Halogeton	67,146	71,000	+3,854						

Various	Missouri River Basin project	5,214,730	5,737,500	+522,770	[5] 13,887	11,000	−2,887	[6] 6,128,617	[6] 6,772,500	+643,883
	Soil and moisture	836,237	999,229	+162,992	[7] 11,975	[7] 9,150	−2,825	848,212	1,008,379	+160,167
	Halogeton	67,146	71,000	+3,854				67,146	71,000	+3,854
	Projects financed entirely with funds advanced.				123,800	127,600	+3,800	123,800	127,600	+3,800
Total		28,402,725	31,900,000	+3,497,275	3,987,246	3,783,290	−203,956	[8] 33,289,971	[8] 36,707,290	+3,417,319

[1] Excludes obligations from emergency funds.
[2] Includes $3,395 advanced by city of Denver.
[3] Includes $1,200 other than water users advances.
[4] Includes $150,000 for fiscal year 1960 and fiscal year 1961 advanced by State of New Mexico.
[5] Includes $3,887 other than water users advances.
[6] Includes $900,000 in fiscal year 1960 and $1,024,000 in fiscal year 1961 from Fort Peck continuing fund.
[7] Advanced by State of New Mexico.
[8] See footnotes 1 and 6.

54170—60—27

Obligations, by functions, fiscal year 1960 and fiscal year 1961

State	Project	Irrigation		Power		Flood control		Other [1]		Total obligations	
		Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961
Alaska	Eklutna			$268,000	$279,500					$268,000	$279,500
Arizona-California	Yuma area projects	$465,985	$574,100	27,170	26,210			$46,700	$47,000	539,855	647,310
Arizona-California-Nevada	Parker-Davis			2,543,189	2,761,070					2,543,189	2,761,070
Arizona-Nevada	Boulder Canyon			1,430,000	1,335,000					1,430,000	1,335,000
California	Cachuma	72,985	77,000							72,985	77,000
	Central Valley	2,684,313	2,969,050	2,986,902	2,828,266			271,852	303,684	[2] 5,943,067	6,101,000
	Kings River	1,460	15,000							1,460	15,000
	Solano	54,982	57,600							54,982	57,600
Colorado	Colorado-Big Thompson	193,000	201,000	712,805	773,000					905,805	974,000
	Grand Valley				59,500						59,500
	San Luis Valley	4,714	4,800			$3,071	$3,200			7,785	8,000
Idaho-Oregon	Boise	61,500	53,300	349,175	358,100	11,000	12,600			421,675	424,000
Idaho-Wyoming	Minidoka area projects	667,593	749,820	812,500	1,253,680	6,500	6,500			1,486,593	2,010,000
Montana	Hungry Horse			484,746	641,800	24,200	24,200			508,946	666,000
	Milk River	245,979	44,351			2,650	2,650	3,350	3,350	251,979	50,351
Nebraska-Wyoming	North Platte	126,000	114,500	121,045	175,000	1,000	1,000			248,045	290,500
New Mexico	Carlsbad	9,100	10,300			4,671	4,700			13,771	15,000
	Middle Rio Grande	850,000	850,000			500,326	600,000			1,350,326	1,450,000
New Mexico-Texas	Rio Grande	1,100,000	1,035,000	383,432	403,500	15,550	17,500			1,498,982	1,456,000
Oklahoma	W. C. Austin	6,750	9,200			2,190	2,600			8,940	11,800
Oregon	Rogue River Basin, Talent division	23,604	28,700	36,300	57,300					59,904	86,000
Oregon-California	Klamath	170,689	180,500							170,689	180,500
Texas	Falcon			4,866	5,000					4,866	5,000
Utah	Provo River			19,317	23,750					19,317	23,750
Washington	Columbia Basin	2,045,000	3,137,000	2,913,396	3,495,000	7,000	8,000	29,500		4,994,896	6,640,000
	Yakima	544,000	443,000	142,362	157,000	5,000	5,000	2,500	24,000	693,862	629,000
Wyoming	Kendrick	4,000	4,000	265,556	345,000					269,556	349,000
	Riverton	46,910	50,000	65,000	62,000					111,910	112,000
	Shoshone	44,910	4,760	115,536	118,230	4,131	5,010			164,577	128,000
Various	Missouri River Basin project	224,642	228,240	5,691,423	6,323,439	186,818	196,733	25,734	24,088	6,128,617	6,772,500
	Projects financed entirely with funds advanced.	75,606	79,406					48,194	48,194	123,800	127,600
Subtotal		9,723,722	10,920,627	19,372,720	21,481,345	774,107	889,693	427,830	450,316	30,298,379	33,741,981

Other operation and maintenance											

	Other operation and maintenance activities:		
	Boulder City, Nev.	600,000	
	Colorado River front work and levee system.	1,476,234	1,885,930
	Soil and moisture	848,212	1,008,379
	Halogeton	67,146	71,000
Total		33,289,971	36,707,290

[1] These totals include the following:

State	Project	Municipal and industrial water		Fish and wildlife		Water control		Town of Coulee Dam		Total other	
		Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961	Fiscal year 1960	Fiscal year 1961
Arizona-California	Yuma area projects					$46,700	$47,000			$46,700	$47,000
California	Central Valley	$271,852	$303,684							271,852	303,684
Montana	Milk River	350	350			3,000	3,000			3,350	3,350
Washington	Columbia Basin							$29,500		29,500	
	Yakima			$2,500	$24,000					2,500	24,000
Various	Missouri River Basin project	11,310	9,393	14,424	14,695					25,734	24,088
	Projects financed entirely with funds advanced	48,194	48,194							48,194	48,194
Total		331,706	361,621	16,924	38,695	49,700	50,000	29,500		427,830	450,316

[2] Excludes obligations from emergency funds.

REIMBURSABLE PERCENTAGE

Chairman HAYDEN. Of the total request, how much is reimbursable?

Mr. DOMINY. Roughly 90 percent of our total budget for operation and maintenance is reimbursable, from power, municipal water, and irrigation payments, and is actually in the Treasury before we expend it.

The other 10 percent covers such items as are customarily by Federal policy nonreimbursable, such as the Colorado River front and levee system, and some halogeton control, and that portion of our projects that is attributable to flood control.

CHANNEL RECTIFICATION IN THE CIBOLA VALLEY

Chairman HAYDEN. Under Colorado River front work and levee system, there is an increase of $457,000 requested for the Cibola Valley division. Just what will these funds be used for?

Mr. PALMER. This is for channel rectification in the Cibola Valley. There is a wall map here that outlines it pretty well. Our map is horizontal rather than vertical, with the Colorado River here at the bottom, and with California at the lower part and Arizona above.

The plan is designed to straighten the channel, make water savings, provide essential drainage and to stabilize stream banks. The dredged channel cuts across this ox bow and down into Cibola Lake. It is a continuation of the river control program authorized under the Colorado River Front Work and Levee System Act.

Chairman HAYDEN. What lands will be benefited by the straightening of the channel?

Mr. PALMER. All land subject to periodic flooding benefits, and all lands anywhere along the river that are subject to overflow or from inordinarily high water table. One of the principal items is the water salvage operation. Downstream water users will also benefit, because, as you will recall, one of the principal purposes of this work is to provide a safe channel by protecting the river from possible damage that could occur from high river discharges which could cause major channel changes. Such changes would tremendously increase the silt load into Imperial Dam Reservoir and the river below the dam.

One of the areas in which there has been considerable discussion and controversy is in this reach of the river through here where the channel rectification would move the dredged chanel about 2½ miles east of where the river now flows and——

Chairman HAYDEN. Where is that place with respect to some town?

Mr. PALMER. This line here is the Palo Verde drain.

Chairman HAYDEN. Yes.

Mr. PALMER. So Blythe would be in this general area here.

Chairman HAYDEN. The lower Palo Verde Valley?

Mr. PALMER. That is right. This is the main drain in the Palo Verde Valley. One of the direct beneficiaries of this work would be the Palo Verde irrigation district. It would benefit from the lowering of the river gradient as you would through this reach of the river, the Palo Verde drain would go in a point sufficiently low to provide the necessary drainage and to make this drain effective.

BOUNDARY CONTROVERSY

Chairman HAYDEN. There is some difficulty in this connection because of the failure of the States to agree upon the boundary between California and Arizona. There was a boundary commission that was appointed by the two States that I believe came to an agreement, but the membership has changed, and whatever agreement was made by the former commission was not ratified by the State legislatures.

And there is also some fear that you are going to take land out of one State and put it in the other.

Mr. DOMINY. We understand, Mr. Chairman, that informal assurances have been supplied to the Arizona people by the present members of the boundary commission—the members from California—that even if this channel is changed by this dredging action, that the existing river would be—would continue to be the accepted boundary.

And we have the assurance that they are prepared to make that recommendation through channels and get the official certification. We don't have it as of now, but there have been some meetings in Yuma very recently.

Haven't there, Mr. Palmer?

Mr. PALMER. There was a meeting in Yuma Friday in which the problem was discussed with the Yuma group and the three major problems in the area were pretty thoroughly aired. One of these is the one you have identified, the question whether the boundary would be at the river or at the dredged channel.

The second is the matter of access. Local interests seek assurance that they could cross the dredged channel to get to their farming or other operations.

Chairman HAYDEN. What I want to get is, would it be better to wait until we have a definite understanding between the two States by way of a ratification of the legislatures, or should we proceed with this work immediately?

Mr. PALMER. Back to Mr. Dominy's point. The meeting that was held was attended by members of the California Boundary Commission, attending informally, and it was agreed that the matter would be put on the agenda for their May 6 meeting. Now, if the assurance came formally I think then the committee would be in a position better to determine whether it should wait for action of the legislature or whether the reassurances of the Commission would be adequate.

The other two problems seem to be fairly well well resolved locally. This sort of an operation is never carried out without adversely affecting somebody.

Chairman HAYDEN. You propose to move the dredges?

Mr. DOMINY. Yes, sir.

And to answer your question about delay, we are finishing up where we are, and the dredge is available, and from a standpoint of utilizing our equipment, the investment in the dredges and in the trained people, we need to bring them up to this new location.

Mr. Chairman, we are going to complete the river rectification work on the Colorado River from Big Bend about 6 miles below Davis Dam

to Topock by the end of the current fiscal year, fiscal 1960, and therefore this equipment and trained men would be available to be moved into this new area.

Chairman HAYDEN. You are satisfied you have got the river in a channel up there now where it is going to stay?

Mr. DOMINY. Well, we will have a small maintenance dredge remaining to do any minor maintenance from time to time that would be required to retain it in that new channel. But we would be prepared to move the main dredge to this Cibola area where the work is badly needed.

ALTERNATIVE TO CHANNEL CHANGE

Chairman HAYDEN. Is there any other alternative to this channel change by pumping or otherwise that would reduce the ground water levels?

Mr. PALMER. Mr. Chairman, there were four basic plans considered. This one that is on the board is officially known as Route D. They have included consideration of various possibilities, one of which was dredging at the existing river channel.

This is the one that offers the best location for a permanent stream, a permanent channel, which is achievable by the minimum amount of dredging and provides the greatest amount of corollary benefits, like reducing the elevation here at this Palo Verde outlet. As you have indicated, of course, you could pump from here into the river, but you would still have the problem of the optimum routing of the river channel.

Now, among the four plans studied, plan D, the one that is sketched on the map, is thought by the technical people who have lived with this problem most closely to offer the greatest benefits.

Chairman HAYDEN. That is an operation and maintenance problem in connection with the Columbia Basin project. We will take that up when we discuss the construction request for the project.

Mr. DOMINY. Very well, sir.

GENERAL ADMINISTRATIVE EXPENSES

Chairman HAYDEN. The budget estimate for "General administrative expenses" is $4,320,000, which is an increase of $30,000 over the appropriation for the current year.

The justifications will be included in the record.

(The justifications follow:)

GENERAL ADMINISTRATIVE EXPENSES

Appropriation Act, 1960	$4,290,000
Decreases: None	
Base, 1961	4,290,000
Increases:	
1. Commissioner's Office, Washington, D.C.	29,600
2. Regional offices	400
Total	30,000
Budget estimate, 1961	4,320,000

Analyses by activity

Activity	Appropriation 1960	Decreases	Increases	1961
1. Commissioner's offices in Washington, D.C., and Denver, Colo.	$2,478,400		$29,600	$2,508,000
2. Regional offices	1,811,600		400	1,812,000
Total	4,290,000		30,000	4,320,000

JUSTIFICATION

The Bureau is requesting an appropriation of $4,320,000 to finance its general administrative expenses during fiscal year 1961. This is $30,000 more than was appropriated for fiscal year 1960. The appropriation requested represents 1.4 percent of the total appropriations being requested by the Bureau for all purposes during the year. This percentage compares with the 1.7 percent allowed in 1960.

The general administrative expenses appropriation finances the overall administrative direction of the Bureau's programs. This includes the formulation and implementation of policies, standards, criteria, and similar managerial activities which are not for the benefit of any individual project, in connection with investigation of potential projects, construction, and rehabilitation of new and existing projects including work programed in the Upper Colorado River Basin, operation and maintenance of completed facilities, administration of the loan program for construction of reclamation facilities by local interests and other work authorized by Congress related to the reclamation program. In the Factfinder's Act of 1925, and subsequent amendments thereto, the Congress recognized the necessity of such overall administrative work and authorized the appropriation of nonreimbursable funds to finance the activities.

In recent years appropriation for general administrative expenses have not kept pace with the Bureau's growing responsibilities. In 1925 at the time of the enactment of the Factfinder's Act, the Bureau had an investment in plant and equipment of $161 million. Today the investment totals over $3.3 billion and by the beginning of fiscal year 1961 the investment will have exceeded $3.5 billion. In 1951 when the total investment in plant and equipment was $1,950 million, the appropriation for general administrative expenses was $7,200,000. By fiscal year 1961, there will be over a billion and a half dollars more invested in Bureau facilities than in 1951. Since the Bureau is responsible for the maintenance and protection of the Government's investment in these facilities, this increase has a direct bearing on the fund requirements of the general administrative expense activity. In fiscal year 1961, the Bureau will administer an overall program that exceeds the immediate prior years. This includes the burden of administration of the projects operated in whole or part by water users and hundreds of separate water contractors maintaining working arrangements with the Bureau; this burden has in no way lessened and what changes have occurred serve to increase the administrative tasks. In the case of power and transmission facilities permanently operated by the Bureau, there is a continuing administrative function, and there are a large and growing number of power marketing contracts which require administrative action throughout the year.

In general, the functions and activities of an overall management nature not directly benefiting individual projects and therefore chargeable to nonreimbursable general administrative expenses appropriations are:

(1) Direction of the several programs of the Bureau.

(2) Determination of policy standards and performance requirements.

(3) Development of procedures for review and control of the Bureau's program.

(4) Overall supervision of methods and objectives.

(5) Coordination of the overall phases of the Bureau's engineering and administrative activities.

(6) Coordination of the Bureau's programs with the programs of other agencies, public and private, having interests in the same areas of conservation and resource development.

(7) Management review of projects turned over to the water users.

(8) Justification of appropriation estimates and requests to the Bureau of the Budget and the Congress, and liaison with the central agencies.

In meeting the responsibilities developed by these criteria, practically all costs of the Commissioner's Office in Washington are financed by this appropriation. In addition, part of the cost of the Commissioner's offices in Denver and the general administrative work in the regional offices are also met from the general administrative expense appropriation. The increasing burden involved in the administration of the Bureau's expanding plant and the other problems associated with the overall supervision of the Bureau's programs create serious administrative problems, including financing of the offices responsible for handling these matters.

COMMISSIONER'S OFFICES IN WASHINGTON AND DENVER

The estimate of $4,320,000 includes $2,508,000 for the Commissioner's offices in Washington, D.C., and Denver, Colo. This is $29,600 more than was allocated to these offices in fiscal year 1960 and was allowed to meet the estimated additional expenses to be incurred under the Federal Employees Health Benefit Act of 1959, and other minor increased administrative costs. These funds will be used to finance the previously described overall administrative and nonproject activities of these offices.

The major portion of the expense required to maintain the Commissioner's office in Denver, Colo., is incurred in rendering technical assistance and services to field offices, projects, and activities, and is financed separate and apart from the general administrative expense appropriation. In fiscal year 1961, as heretofore, these services will be financed by transfer of funds from project and activity allotments on a program basis. The appropriations required for these transfers are included in the project activity estimates for the fiscal year. A majority of such funds will be transferred from the construction and rehabilitation and the Upper Colorado River Basin fund appropriations, although some funds will be transferred from the operation and maintenance and general investigations appropriations. The advance of funds will be based on the project or activity program that governs the amount of planning, design, laboratory analysis, and related work which the Denver office will be required to perform directly for each such project or activity.

Bureau construction often is of a scale which requires the engineering design work to extend over a period of years. The activities of the Denver offices, therefore, do not tie directly to the construction program in the field for any given fiscal year. Design work usually precedes construction by a year or more. Year to year increases or decreases in the Bureau's field programs and the changes in Denver do not necessarily coincide in any given year. Services to projects to be performed in the Denver offices during fiscal year 1961 are estimated at $10,183,200.

Regional offices

The regional offices' estimate for general administrative expenses for 1961 is $1,812,000, the same amount as was made available for the current year. On the basis of the present organization this amount approaches minimum requirements only.

In addition to the nonproject administrative responsibilities of the regional office, there are certain types of work, such as construction design and contracting, planning, accounting, etc., required for the direct benefit of a project or other activities which are performed more economically and efficiently on a centralized basis. Where circumstances permit and to avoid duplication of project office staffs, the Bureau detaches the common part of project organizations which it centralizes regionally for the performance of such work. By this procedure the Bureau can supply the skilled services required in the various technical fields at lesser cost to the several projects or activities controlled by the central office.

In addition to the above, the regional offices incur charges to projects for some indirect work on this centralized basis. This course becomes necessary because of two factors: (1) The facilitating services at the regional offices are shared by all beneficiaries, and (2) the need to finance essential administrative services of project benefit to cover the actual workload that must be performed.

Since the centralized project activity work is performed for the benefit of projects, direct and indirect, such work is financed through payments from those projects and activity allotments financing the work programed, and the obligations for this work are included on the schedules of the projects receiving the services. Work of this type in fiscal year 1961 is estimated at $6,988,000.

Itemization of estimate

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
PROGRAM AND FINANCING			
Total obligations, appropriation (new obligational authority)	$4,290,000	$4,320,000	+$30,000
OBJECT CLASSIFICATION			
01 Personal services	3,593,812	3,615,263	+21,451
02 Travel	161,460	162,410	+950
03 Transportation of things	21,310	20,175	−1,135
04 Communication services	69,810	65,885	−3,925
05 Rents and utility services	4,860	5,180	+320
06 Printing and reproduction	37,050	32,860	−4,190
07 Other contractual services	42,479	71,185	+28,706
Services performed by other agencies	33,260	36,280	+3,020
08 Supplies and materials	56,860	48,200	−8,660
09 Equipment	32,663	24,687	−7,976
11 Grants, subsidies and contributions	220,501	221,960	+1,459
13 Refunds, awards, and indemnities	15,380	15,360	−20
15 Taxes and assessments	555	555	
Total obligations	4,290,000	4,320,000	+30,000

NEED FOR INCREASE

Chairman HAYDEN. Please comment on the need for the increase of $30,000.

Mr. DOMINY. I would like to have Assistant Commissioner Golze comment on that.

Mr. GOLZE. The majority of that money is required for the health program which goes into effect July 1.

LOAN PROGRAM

Chairman HAYDEN. The budget estimate for the loan program is $18,437,000.

The justifications will be included in the record.

(The justifications follow:)

LOAN PROGRAM

Summarized financial data

Appropriation, fiscal year 1960	$11,227,587
Estimate of appropriations, fiscal year 1961	18,437,000

JUSTIFICATION

Authorization.—Under Public Law 130, 84th Congress (69 Stat. 244) as amended, the Bureau of Reclamation is authorized to make loans for the construction of irrigation distribution systems on authorized projects, and under Public Law 984, 84th Congress (70 Stat. 1044) as amended, to make loans for the construction, rehabilitation, and betterment of small reclamation projects, both under specific criteria established by the authorizing legislation.

Status.—As of January 30, 1960, the full amount of the required funds has been appropriated for four distribution system loans and seven small project loans. Good progress has been made toward construction of these projects. In addition partial funds sufficient for the first-year's activities for four more small projects loans were appropriated for fiscal year 1960. Five additional small projects loan applications have been approved and forwarded to the Congress. These will complete their 60 days before the committees by March 10, 1960, and will then be eligible for appropriations if no unfavorable committee action is taken. Three other small projects applications have been received and will be processed this session of Congress. A number of other organiza-

tions are preparing basic studies for applications for loans that will be submitted in the future.

Funds required, fiscal year 1961, $18,437,000.—Those loans for which partial financing was received in fiscal year 1960 will require the balance of the funds to permit the completion of construction. This will require $7,326,925 as follows:

Santa Ynez River Water Conservation District, California	$2,487,000
Pleasant Valley County Water District, California	1,651,750
Georgetown Divide Public Utility District, California	2,261,175
Jackson Valley Irrigation District, California	927,000

The five additional applications that have been approved and submitted to the Interior and Insular Affairs Committees will be eligible for funds upon completion of committee action. This will require $10,890,000, as follows:

Weber-Box Elder Conservation District, Utah	$302,000
Haights Creek Irrigation Co., Utah	212,000
Donna Irrigation District, Hidalgo County, No. 1, Texas	4,061,000
San Benito County Water Conservation and Flood Control District, California	1,420,000
South San Joaquin Irrigation District, California	4,895,000

Full amounts of loans are requested to avoid problems in our relations with the borrowers in administering the loans during the construction period. In addition, immediate full financing of the loans will permit the local organizations to proceed without the added expense incumbent upon small construction contracts not fully financed in advance.

Funds in the amount of $220,075 will be required for the administration of the loan program. These funds will be used for the investigation of potential loans, the negotiation of contracts and other administrative actions necessary to the program including answering inquiries, explaining technical and legal requirements to potential applicants and similar activities. These activities must be performed prior to the granting of a loan and therefore require an independent source of financing. Upon execution of a contract for a loan under this program, all costs incurred on that specific proposal to that time, as well as all future costs, will be charged to the organization securing the loan, to be repaid as a part of the loan. Since the authorizing acts make no provision for the collection of funds spent on unsuccessful applications or on generalized administrative functions not assignable to specific completed loans, a portion of these administrative funds, and of all previously appropriated funds used for this purpose, are considered nonreimbursable.

Itemization of estimate

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
PROGRAM AND FINANCING			
Total obligations	$16,204,729	$19,001,098	+$2,796,369
Unobligated balance brought forward	−5,541,240	−564,098	+4,977,142
Unobligated balance carried forward	564,098		−564,098
Appropriation (new obligational authority)	11,227,587	18,437,000	+7,209,413
OBJECT CLASSIFICATION			
01 Personal services	145,150	145,315	+165
02 Travel	10,240	11,695	+1,455
03 Transportation of things	200	190	−10
04 Communication services	720	750	+30
05 Rents and utility services	480	455	−25
06 Printing and reproduction	2,350	2,290	−60
07 Other contractual services	67,035	47,990	−19,045
Services performed by other agencies	41,379	12,440	−28,939
08 Supplies and materials	1,880	1,915	+35
09 Equipment	980	940	−40
11 Grants, subsidies, and contributions	8,575	8,410	−165
16 Investments and loans	15,925,740	18,768,708	+2,842,968
Total obligations	16,204,729	19,001,098	+2,796,369

FINANCING THE LOAN PROGRAM

Chairman HAYDEN. I note that your estimate is based on full financing of each of the loans, rather than on annual financing that was used for the current year. Tell the committee why you feel that the full amount of each loan should be appropriated, rather than only the sum required during the year.

Mr. DOMINY. Well, as I have reported to the committee in previous years, these are relatively small projects. In considering the need for the Small Projects Act, the proponents of the bill placed considerable emphasis on the fact that overhead expenses would be much smaller if it could be done by loan and have the full amount available so they could go to a contractor and say, "We have the loan money, the full amount is in the bank, so to speak, and we can meet your earnings as fast as you can do the work." And it has very good advantages, as contrasted to our estimating what could be done in any given fiscal year on a small project and the amount banked only to that extent.

You, of course, recognize that this has been up now for 2 or 3 years, and the House consistently finances it on an annual basis.

Chairman HAYDEN. The estimate includes $10,890,000 for five new projects. Please include a statement of each of these in the record.

Mr. DOMINY. Very well, sir.

(The statement referred to follows:)

LOAN PROGRAM

Weber-Box Elder Conservation District, Utah.—The loan will be used to construct an irrigation distribution system to serve about 1,390 acres of small tracts, north of Ogden, devoted to high-value fruit, truck, nut, and other specialty crops. About one-fourth of the area is used, at present, for residential purposes and some water will be utilized for the irrigation of lawns and gardens, but none for household or industrial purposes. The system will include pipelines and two small regulating reservoirs to equalize the water demands over a full day period. The loan is to be repaid in 50 years with interest on portion assigned to residential use. There are no lands in ownerships in excess of 160 acres. The work will require about 7 months to complete, so the entire amount will be required this first year.

Fiscal year 1961 ..... $302,000

Haights Creek Irrigation Co., Utah.—This loan will be used to build an irrigation distribution system to serve about 2,300 acres of small tracts, about 15 miles north of Ogden, devoted to fruit, truck, grains, forage, and specialty crops. About 8 percent of the area is utilized for residential purposes at present and some water will be used for lawns and gardens but none for household or industrial purposes. The system will include pipelines, a small regulating reservoir and a diversion dam on a local stream. The loan is to be repaid in 35 years with interest on portion assigned to residential use. There are no excess lands. The district expects to complete the construction in about 3 months, thus, the entire amount will be required the first year.

Fiscal year 1961 ..... $212,000

Donna Irrigation District, Hidalgo County No. 1, Texas.—This project is the rehabilitation and betterment of an existing irrigation system which serves a total of about 34,500 acres in the district and delivers minor amounts of water to the city of Donna, an adjacent irrigation district and a couple of small industrial plants. The work will reduce operation, maintenance, and replacement costs and will increase the acreage of land that can be irrigated in 1 year from 21,600 to 29,250 acres. The work will include lining or conversion to pipe of unlined canals, repairs to lined canals and laterals and to canal structures, the reconstruction of the pumping plant, and cleaning and repairs of drainage works. The loan is to be paid in 35 years with interest on those portions

assigned to irrigation of excess lands in the district and in the adjacent district, and to municipal and industrial uses. This work is expected to require about 2 years to complete, with expenditures as follows:

Fiscal year 1961	$2,050,000
Fiscal year 1962	2,011,000

San Benito County Water Conservation and Flood Control District, California.—This loan is to be used for the construction of a storage dam and reservoir for the regulation of streamflow to be used for ground-water recharge for an area of about 24,700 acres near Hollister. About 5 percent of the ground water in the area is used for municipal and industrial purposes and the rest for irrigation. The project includes no facilities other than the dam and reservoir because all other necessary facilities are now available and are being used for the unregulated streamflow available. The loan is to be repaid in 40 years with interest to be paid on a portion of the loan equal to the proportion of the ground water used for municipal and industrial purposes and on a percentage of the remainder equal to the percentage of lands held in excess ownership. It is estimated that the work will be completed within 5 months, so the full amount will be required the first year.

Fiscal year 1961	$1,420,000

South San Joaquin Irrigation District, California.—The loan is to be used to replace about 171.5 miles of existing open canals with pipe. This existing irrigation system serves about 64,500 acres near Manteca. The conversion of the open ditches to pipe will decrease operation and maintenance costs, will conserve water and will eliminate the obstructions caused by the open ditches. No municipal or industrial water supply is provided by this system. The loan is to be repaid in 34 years with interest on the portion assigned to service excess lands. It is anticipated that this work will require about 4 years and that expenditures will be as follows:

Fiscal year 1961	$1,400,000
Fiscal year 1962	1,200,000
Fiscal year 1963	1,200,000
Fiscal year 1964	1,095,000

ANNUAL FINANCING REQUIREMENTS

Chairman HAYDEN. I think you should also submit a statement for the record indicating how much will be required for each project if it is determined to continue on an annual financing of these loans.

Mr. DOMINY. Very well, sir.

(The statement referred to follows:)

Bureau of Reclamation loan program, fiscal year 1961

Project	Total appropriation requirement	Fiscal year 1960 appropriation	Additional fund requirement	
			To complete full financing	Fiscal year 1961 partial financing
Santa Ynez River Water Conservation District, California	$3,774,000	$1,287,000	$2,487,000	$810,000
Pleasant Valley County Water District, California	2,032,000	380,250	1,651,750	1,651,750
Georgetown Divide Public Utility District, California	3,867,000	1,605,825	2,261,175	750,000
Jackson Valley Irrigation District, California	1,317,000	390,000	927,000	927,000
Weber-Box Elder Conservation District, Utah	302,000		302,000	302,000
Haights Creek Irrigation Co., Utah	212,000		212,000	212,000
Donna Irrigation District, Hidalgo County No. 1, Texas	4,061,000		4,061,000	2,050,000
San Benito County Water Conservation and Flood Control District, California	1,420,000		1,420,000	1,420,000
South San Joaquin Irrigation District, California	4,895,000		4,895,000	1,400,000
Total	21,880,000	3,663,075	18,216,925	9,522,750
Administration			220,075	220,075
Total			18,437,000	9,742,825

PENDING LOAN APPLICATIONS

Chairman HAYDEN. Now, are there any loan applications pending that will meet the requirements of the authorizing act by June 1, 1960?

Mr. PALMER. There are two that Senator Engle identified this morning. We could put these statements in the record.

(The statement referred to follows:)

LOAN PROGRAM—PROJECTS NOT IN FISCAL 1961 BUDGET

Browns Valley Irrigation District, California.—This loan will be used to develop a storage reservoir and to enlarge and extend the distribution system. The proposed work will permit the irrigated area to be increased from 3,400 acres to 10,600 acres in the district which lies about 10 miles northeast of Marysville. Of this area about 9,400 acres will be used for irrigated pasture to supplement dry lands used for dairy, beef, and sheep enterprises, and about 1,200 acres will be devoted to olive production. The new reservoir will permit a portion of the present water supply to be rerouted so that it can pass through two powerplants; this will produce additional revenues for the district. The loan is to be repaid in 50 years with interest on portions allocated to power production and irrigation of excess lands. The application will complete the required 60 days before the Interior and Insular Affairs Committees about May 14, 1960. It will take about 18 months to construct the project facilities and actual expenditures will be about as follows:

Fiscal year 1961	$700,000
Fiscal year 1962	4,100,000

South Sutter Water District, California.—This loan is to be used to construct a storage reservoir, diversion works and distribution system to serve an area of about 51,000 acres located about 20 miles north of Sacramento. The system will provide surface water to an area now partially irrigated from ground water with high pumping lifts. Although the facilities can deliver water throughout this area, only about one-third of the land can be irrigated from surface water in a single year, because of limited water supply. The loan is to be repaid in 50 years with interest paid on a portion of the loan allocated to lands held in excess of 160 acres in a single ownership. The application will complete the required 60 days before the Interior and Insular Affairs Committees about June 5, 1960. It is anticipated that it will require about 30 months to complete the construction, with actual expenditures about as follows:

Fiscal year 1961	$700,000
Fiscal year 1962	4,000,000
Fiscal year 1963	152,000

BOULDER CITY MUNICIPAL FUND AND DISPOSAL OF COULEE DAM COMMUNITY

Chairman HAYDEN. The statement in the justifications in support of the request for Boulder City Municipal Fund and disposal of Coulee Dam Community will be included in the record.

(The justifications follow:)

DISPOSAL OF COULEE DAM COMMUNITY

Summarized financial data

Appropriation, fiscal year 1960: Permanent appropriation	$60,000
Estimate of appropriations, fiscal year 1961:	
Appropriation request	15,000
Permanent appropriation	16,000
Total	31,000

JUSTIFICATION

Description.—From the proceeds of the sale of Federal property in the town of Coulee Dam and the city of Grand Coulee authorized by the Coulee Dam Community Act of 1957, August 30, 1957 (71 Stat. 524), a fund is established which is available for expenditure, directly or through the local units of Government, for work in connection with the disposal of the Federal interest in the communities, for construction of sewage disposal facilities, including betterment work on the existing open drains and financial assistance after incorporation. The legislation provides for three scheduled assistance payments to the new municipality after incorporation. The first payment was made at the time of incorporation and the others will be in annual intervals thereafter. In accordance with subsection 9(a) of the act the latter payments can be made only after specific appropriation by Congress. The community was incorporated on February 26, 1959. The appropriation requested for fiscal year 1961 is for the third scheduled payment. The second scheduled payment is proposed for later transmission as a supplemental request for fiscal year 1960. It is estimated that sufficient revenues will be available in the fund to cover these appropriations.

Use of funds, fiscal year 1961

These funds will assist the city of Coulee Dam to continue meeting its expenses incident to incorporation and the beginning of municipal operations. This payment will help offset the lag in town revenues and furnish funds for the town's current expense budget. The amounts of assistance payments were specified in the authorizing legislation and were based on projected estimates of income and expenses of the city for the first 3 years after incorporation. These estimates now appear to have been wholly valid as the annual deficits of income in relation to expenses are approximating these amounts.

Itemization of estimate

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing:			
Total obligations	$66,630	$31,000	−$35,630
Unobligated balance brought forward	−6,630		+6,630
New obligational authority	60,000	31,000	−29,000
New obligational authority:			
Current definite		15,000	+15,000
Permanent indefinite	60,000	16,000	−44,000
Appropriation	60,000	31,000	−29,000
Object classification:			
01 Personal services	23,000	10,000	−13,000
02 Travel	250		−250
04 Communication services	250		−250
07 Other contractual services	26,500	5,500	−21,000
Services performed by other agencies	15,000		−15,000
11 Grants, subsidies, and contributions	1,630	15,500	+13,870
Total obligations	66,630	31,000	−35,630

Chairman HAYDEN. The statement in the justifications in support of the request for the "Boulder City Municipal Fund" and "Disposal of Coulee Dam Community" will be included in the record.

BOULDER CITY MUNICIPAL FUND

Summarized financial data

Appropriated, fiscal year 1960: Permanent appropriation	$270,000
Estimates for appropriations, fiscal year 1961:	
Appropriation request	150,000
Permanent appropriation	8,000
Total	158,000

JUSTIFICATION

Description.—This fund was established by the Boulder City Act of 1958, September 2, 1958, Public Law 85-900 (72 Stat. 1726). It is derived from the sale of Federal property in Boulder City, Nev., and is available for work in connection with the disposal of certain Federal property in the town, financial assistance to facilitate the establishment of a municipal corporation under the laws of the State of Nevada, and for other purposes. Incorporation of the community was effected on October 28, 1959, and the actual separation took place on January 4, 1960. As authorized under subsection 6(b)(2) of the above cited legislation $150,000 for work in the Lakeview addition is requested from the Boulder City municipal fund for fiscal year 1961. It is estimated that sufficient revenues will be available in the fund to cover this appropriation.

Work proposed, fiscal year 1961

The following initial construction of additions and improvements amounting to $150,000 will be performed in that area referred to in the Boulder City Act as Lakeview addition. This work will be performed by the Bureau of Reclamation.

Street surfacing and lighting, $54,500.—These funds will permit street surfacing based on following the alinement of existing roads as closely as possible while attempting to conform to the master plan for subdivision. Due to haphazard location of houses and shacks, locating streets without removal of a few buildings will be extremely difficult. Many homes in the area will require relocation to fit any acceptable street and lot layout that might later be devised. Street lighting includes using existing facilities where possible and would light only the central area of the subdivision. Existing powerlines are not adequate for street lighting and a new circuit must be extended from Boulder City.

Sewage disposal, $60,000.—This will provide for the main sewer lines plus septic tank and leaching field. Residents will be expected to make connection with sewer mains at their expense.

Flood protective work and water system for fire protection, $35,500.—This program will provide necessary flood protective works since part of the subdivision extends into the broad flood plain and additions to the water system which must be installed in order to have adequate fire protection for the Lakeview addition.

Itemization of estimate

	Estimate, 1960	Estimate, 1961	Increase (+) or decrease (−)
Program and financing:			
Total obligations	$193,545	$158,000	−$35,545
Unobligated balance brought forward	−23,545		+23,545
Return of loan to "Colorado River dam fund, Boulder Canyon project"	100,000		−100,000
New obligational authority	270,000	158,000	−112,000
New obligational authority:			
Current definite		150,000	+150,000
Permanent indefinite	270,000	8,000	−262,000
Appropriation	270,000	158,000	−112,000
Object classification:			
01 Personal services	25,000	5,000	−20,000
02 Travel	3,500		−3,500
03 Transportation of things	100		−100
04 Communication services	300		−300
06 Printing and reproduction	300		−300
07 Other contractual services	163,000	2,650	−160,350
Services performed by other agencies	220		−220
08 Supplies and materials	300		−300
11 Grants, subsidies, and contributions	800	150,350	+149,550
15 Taxes and assessments	25		−25
Total obligations	193,545	158,000	−35,545

Administrative Provisions

Chairman Hayden. The statements in the justification in support of your request for the purchase of 98 passenger vehicles for replacement and for the purchase of one aircraft for replacement will be included in the record.

(The statements referred to follow:)

Administrative Provisions

Purchase of Motor Vehicles

The number of passenger-carrying vehicles owned by the Bureau has been decreased each year during the past eight. The change in utilization of sedans is a result of transfer to interagency motor pools of on-highway use vehicles which consistently maintain highest average utilization. The Bureau utilization of vehicles on construction continues to be well above the standard.

Fiscal year	Automobiles		Station wagons		Total, all cars and trucks
	Number	Average miles per vehicle-year	Number	Average miles per vehicle-year	
1952	1,175	9,877	773	8,791	4,626
1953	1,144	9,901	623	8,351	4,397
1954	860	9,693	223	7,584	3,684
1955	739	10,275	120	8,094	3,315
1956	737	10,486	100	8,186	3,378
1957	664	11,582	64	10,110	3,434
1958	605	11,248	47	10,264	3,230
1959	571	10,570	41	10,630	3,052

Sixty percent of the reduction in the number of passenger-carrying vehicles was due to the program, to emphasis on the selection of types better suited to off-highway use in project investigation and construction work, and to improved utilization through better management; the remaining 40-percent reduction was due to transfer of passenger-carrying vehicles to newly established interagency motor pools. The reduction in passenger-carrying vehicles from fiscal year 1952 through fiscal year 1959 totaled 1,336. The entire fleet of passenger cars through trucks of all capacities was reduced 1,574 during the same period.

At the beginning of fiscal year 1960, of the 612 sedans and station wagons on hand (571 sedans and 41 station wagons), 48 exceeded replacement standards by mileage (over 60,000 miles); 30 by age (over 6 years old); and 36 by both mileage and age. These totaled 114 vehicles, or 19 percent of the passenger-carrying fleet. During fiscal year 1960, 84 passenger-carrying vehicles will be replaced and the fleet further reduced by the disposal of 41 vehicles without replacement.

Any vehicles purchased during fiscal year 1961 will probably be delivered about March 1961. At that time, in addition to the 98 passenger-carrying vehicles for which purchase authorization is being requested, all of which are for replacement, another 43 will have exceeded mileage replacement standards, and 2 more will have exceeded the age criteria, making a total of 143 vehicles eligible for replacement. However, only the 98 for which replacement is requested will be so uneconomical of operation and maintenance as to warrant withdrawal from service. Good management of a motor vehicle fleet requires the replacement of individual units when continued operation would materially increase costs or contribute to unsafe operation.

The 98 vehicles for replacement only consist of 93 sedans and 5 station wagons or 17 percent of the passenger-carrying fleet necessary to insure the economical continuity of the Bureau's authorized program.

During fiscal year 1959 cooperation with the General Services Administration has been continued by participation in the use of that agency's motor vehicle pools established contiguous to Bureau installations, and none of the vehicles

for which authorization to purchase is being requested are to be used where GSA pools are in operation.

Purchase of aircraft

It is recommended that the Bureau be authorized to replace one aircraft at our Kansas River projects during fiscal year 1961, which will have been in service 10 years and, at present rate of usage, will then require extensive replacement of major components and correction of structural weaknesses due to use and age. Such maintenance and repair is conservatively estimated to cost $5,000 at a minimum in addition to normal maintenance expense. It is believed that this anticipated required expenditure during fiscal year 1961 on the present aircraft can be applied more practically to the acquisition of a new, small, twin-engine aircraft with an associated marked increase in operational convenience and safety.

A majority of flights in the Kansas River projects area are made to and from small towns and Bureau reservoir sites utilizing unattended landing strips and frequently away from immediate contact with FAA communications and airway weather information. Despite excellent maintenance and normal precautionary and safety measures employed by the pilot, there is always the potential of an unexpected forced landing. Under such circumstances, twin-engine operation usually assures ability to return to or reach a nearby landing strip on one engine rather than make a forced landing in a pasture or other field because of lack of any motive power. Small twin-engine aircraft of the type recommended are equally versatile to our present single-engine craft in their ability to operate dependably from minimum-length landing strips.

Other advantages of the recommended replacement aircraft include reduction in flying time between given points with increased passenger-carrying capacity and slower engine operation resulting in low maintenance, longer periods of operation between required major overhaul or replacement, and longer engine life. Actual cost per passenger-mile over a year's operation should remain about the same as for the present aircraft, despite increased oil and fuel consumption, due to increased passenger potential and reduced flying time. Of approximately 250 working days a year, the present plane has been operated on an average of 150 days per year with an average passenger load of 2.3 passengers.

In summary, the replacement of aircraft as recommended is considered desirable from the following standpoints: (*a*) Age, condition, and obsolescence of present aircraft; (*b*) safety of twin-engine operation; (*c*) increased transportation potential and usage of replacement aircraft.

EXEMPTION FROM FORCE ACCOUNT LIMITATION

Chairman HAYDEN. I note that you are requesting that funds appropriated for rehabilitation and betterment of existing projects be exempted from the force account limitation. The statement in the justification in support of this request will be included in the record.

(The statement referred to follows:)

Addition of proviso exempting rehabilitation and betterment work from limitation on force account work

The language exempts from the provisions of the force account limitation work performed under the Rehabilitation and Betterment Act of 1949 (63 Stat. 724).

Rehabilitation and betterment work frequently does not fall into the pattern of the Bureau's regular construction work. As a rule, the rehabilitation and betterment projects are much smaller than the Bureau's regular construction projects, and by the same token, the project features or separable work items are also smaller. As a result, there have been cases on which no bids were received for work scheduled, despite the time and effort involved in preparing plans and specifications and advertising for bids. Furthermore, work on rehabilitation and betterment projects frequently must be performed under physical conditions which do not lend themselves to favorable contract bids.

In some cases, especially in the Southwest where year-round use is made of project facilities, rehabilitation and betterment work must be done only as it can be meshed with uninterrupted use of the project facilities. Contractors

cannot afford to tie up men and equipment under such indefinite conditions, hence, if they bid at all on such work, their offers carry a large contingency factor which make them too high to consider. Because of these factors, it is not unusual for the irrigation district involved to perform the rehabilitation work with its own forces.

In cases where projects are operated and maintained by the Bureau, trained Bureau personnel are already available to perform such work as may be required. However, despite these conditions, the present limitation on work by Government forces prevents this efficient approach. The proposed language will permit the Bureau, at a saving to the project facility users, to make full use of these trained employees. This appears to have been the intent of Congress when the Rehabilitation and Betterment Act was written, because provision is made therein for the work to be done by contract, by force account or by contract entered into with the local organization concerned whereby such organization would perform the work.

The Bureau chooses, as it has always done, to contract as much of its work as feasible, and the proposed language contemplates no change in that practice with respect to new construction work. However, it does feel that because of the existence of special conditions in connection with some rehabilitation and betterment projects, there should be authority to waive the provisions of the force account limitation in the interest of economy and efficiency.

Other Permanent Appropriations

Chairman Hayden. The statement in the justifications pertaining to other permanent appropriations will be included in the record.

(The justification referred to follows:)

Bureau of Reclamation—Other Permanent Appropriations

Appropriated (estimate), 1960	$3,933,000
Estimate, 1961	3,910,000
Decrease	23,000

Justification

1. Colorado River Dam fund, Boulder Canyon project, payment of interest on advances from the Treasury, $3,200,000

Interest is paid to the Treasury on moneys advanced for construction (43 U.S.C., ch. 12A).

2. Colorado River Dam fund, Boulder Canyon project, payments to States of Arizona and Nevada, $600,000

Annual payments of $300,000 each, in lieu of taxes, are made to Arizona and Nevada from operation of the Boulder Canyon project (43 U.S.C., ch. 12A).

3. Operation, maintenance, and replacement of project works, North Platte project, $10,000

This fund is derived from operation of project powerplants, leasing of project grazing and farm lands, sale or use of townsites, and sale or rental of surplus water (66 Stat. 755, sec. 4).

4. Payments to the Farmers' Irrigation District (North Platte project, Nebraska-Wyoming), $8,000

Payments are made to the Farmers' Irrigation District on behalf of the Northport Irrigation District for water carriage (62 Stat. 273, as amended).

5. Refunds and returns, $192,000

Overcollections are refunded and amounts of unapplied deposits are returned (64 Stat. 689).

Committee Recess

Chairman Hayden. The committee will stand in recess until 10 o'clock tomorrow morning.

(Whereupon, at 12:05 p.m., Wednesday, May 4, 1960, the subcommittee adjourned, to reconvene at 10 a.m. Thursday, May 5, 1960.)

PUBLIC WORKS APPROPRIATIONS FOR 1961

THURSDAY, MAY 5, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10:05 a.m., pursuant to recess, in room 1226, New Senate Office Building, Hon. Carl Hayden (chairman) presiding.

Present: Chairman Hayden and Senators Ellender and Dworshak.

Also present: Senator Case.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENT OF HON. FRANCIS CASE, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

SOUTH DAKOTA PROJECTS

Chairman HAYDEN. The committee will be in order. We are glad to see you, Senator.

Senator CASE. Thank you very much, Mr. Chairman.

Mr. Chairman, the appropriations requests of the Bureau of Reclamation for planning and construction in South Dakota are very modest in the budget before you but their size in no way indicates how important they are to my State. We have given up half a million acres to provide storage to protect downstream States from Missouri River floods and yet do not have an acre of land under irrigation as a result. The budget items now before you give us the first hope of putting water on land in a few small widely scattered projects.

With your permission I will comment briefly upon them.

WAGNER UNIT PLAN REPORT

I support the budget request of $200,000 for the feasibility investigations on the Wagner unit. I am told this amount will be sufficient to finish the investigational work and draft the definite plan report.

There are about 24,800 irrigable acres in the Wagner unit. The water supply will be taken from the Fort Randall Reservoir by a lift of 153 feet. This area has a climate typical of the Great Plains area, in that its rainfall is marginal.

The project is relatively small as irrigation projects go, but when once established will have a great stabilizing influence on the economy of a large area.

Being small, it can go forward rather rapidly and full support should be given the Bureau of Reclamation to complete the study in fiscal 1961 if at all possible.

Chairman HAYDEN. The water will have to be lifted and the power is there to do it.

Senator CASE. That is correct. The power is there at the Fort Randall Reservoir. This is an area, Mr. Chairman, where they have experienced the boom-and-bust type of agriculture some very good years and some very poor years.

This project would level out the peaks and the valleys and stabilize not merely the farmers under the project but would provide a feed reservoir for hundreds of farmers all around.

The Geddes unit lies alongside the Wagner unit and it is my hope and desire that the Bureau further study this project as they work in the Wagner area, with the possibility of annexing the class 1 and 2 lands to the Wagner unit, or by some rearrangement of the Geddes unit, which might make it a feasible project.

PRECONSTRUCTION OF SMALL UNITS

I support the budget request of $110,000 for the preconstruction and advanced planning investigation of Crazy Horse unit comprising 529 acres; the Tower unit, comprising 1,980 acres, the Greenwood unit, comprising 4,590 acres, and the Yankton unit, comprising 1,105 acres.

There is a small amount of Indian lands in the Tower and Greenwood units, which adds to the Federal interest in these projects.

I understand that all these small units have a very favorable benefit-cost ratio so the Bureau should be able to rapidly complete their plans so construction funds also can be requested.

They lend themselves to being gotten underway because of their small size. These are very worthwhile projects in that the land is fertile, lying in the bends of the Missouri River, are susceptible to irrigation, and will have a favorable economic impact on the several areas.

PLANNING FOR SHADEHILL UNIT

I support the budget request of $98,000 for the Shadehill unit for developing the irrigation features and finishing the planning, all of which is to be completed in fiscal 1962. The Bureau of Reclamation has indicated the following breakdown of the total amount: $62,000 for the investigational and irrigation features, $27,000 for construction of health and sanitary facilities, and so forth, $9,000 for continuing research on the water and soils.

This project has been held in abeyance because of the high sodium content of the water in the reservoir. South Dakota State College and the Bureau of Reclamation have conducted a demonstration farm in the area for several years, using the water under various types of soil and crop production conditions. The work terminated this past year with both parties agreeing that it was safe to use the water from the reservoir for irrigation.

This dam was built some years ago, and this is the first chance to get some returns on it.

I therefore urge that the request be granted so that the planning can be completed in fiscal year 1961 and construction funds requested in fiscal year 1962.

OAHE UNIT, LAKE BYRON PROJECT

The Bureau of Reclamation is requesting $20,000 for a continued review of the unit report of the Oahe unit and for continuation of discussions with the local interests. The completed report of the Oahe unit is due June 30 this year. The advance release of some details on the report shows the project to be feasible. The several State agencies will assist the Bureau in informing the people of the contents of the report. Should the report not go into detail enough to establish Lake Byron as a feasible multipurpose facility for both irrigation and municipal water supplies, I reserve the right to later request funds to complete the survey and planning of such a project.

I understand that a full investigation such as may be needed will cost $95,000. I hope that the joint report that the Corps of Engineers and the Bureau are now making will answer the problems in connection with the multipurpose use of Lake Byron. If it does, I plan to ask for construction funds so the project can get underway immediately.

ANGOSTURA PROJECT

I wish to support the budget request of the Bureau of Reclamation of $128,000 for the Angostura project. These funds will provide surface and subsurface drainage works. This project involves some 12,000 acres of land and was organized under the Case-Wheeler Act. The land lies on the lower of two terraces bordering the Cheyenne River. The area is permeated with springs as the overlying terrace deposits consist mostly of permeable gravel and sand. The ground water in this area is derived from precipitation. Application of water from the Angostura Reservoir has increased the available ground water supply which in turn increased the flows of the existing springs and seeps.

This is especially true in at least three areas. This has caused some acceleration in the seepage problem. This project is very successful, has been a great factor in furnishing hay and grain to surrounding farms and ranches and has furnished an income to those on the project of from $4,000 to $6,000 a year. I endorse this appropriation request.

I might say parenthetically, without the benefit of the usual development period which goes on to the ordinary irrigation project, this project has had three crop seasons now and has far surpassed expectations. It is demonstrating that these selected farmers, these young veterans there had done a good job.

They are getting their head above water so to speak, they are starting payments on the repayment contracts and are doing it at a much earlier date than the average irrigation project. They produce some sugar beets. It has been an augmentation of a sugar beet factory at Belle Fourche which had a limited supply of raw material. They are getting more with the supplementary acreage from Angostura.

Chairman HAYDEN. Did you have a nationwide drawing as we did on the Yuma Mesa project?

Senator CASE. I wouldn't say a nationwide drawing because there was an original amount of $12,000 and $4,000 for 16,000 acres but they did invite veterans to apply. There was a committee consisting of agencies of the Federal Government and the county agent who went over the applications of the veterans.

Chairman HAYDEN. They came from everywhere?

Senator CASE. They did. They are not just local people. They are doing a good job.

GARRISON DIVERSION UNIT

Senator CASE. The Garrison diversion unit partly in North Dakota and partly in South Dakota, I support the request here, the appropriation request for $450,000 for the continuation of the investigation and planning on the Garrison diversion unit in North and South Dakota. This project proposes to divert water from the Missouri River through the Garrison Dam into central and eastern North Dakota and into the northeast counties of South Dakota.

The present tentative proposal calls for the storage of water in the Jamestown Reservoir and by using the James River to carry the water and the Oakes series of canals to irrigate 54,000 acres in South Dakota in addition to 57,000 acres in North Dakota.

The increased flows in the James River because of the diversion and the storage in the Jamestown Dam will make it possible to increase the water supplies of the cities and towns along the river.

At the present time the Corps of Engineers and the Bureau of Reclamation are jointly studying the possibility of using Lake Byron as a storage reservoir for both the return flows from irrigation and the increased supplies in the river from the Garrison diversion. It is contemplated that additional supplies of water can be furnished from Lake Byron to Huron and other towns along the James River.

WATERSHED PROGRAM

South Dakota has, for many years, been planning and developing its water program in this northeast section of the State with North Dakota. The two States by nature have a common water problem in this area.

In Marshall County, S. Dak., you will find the continental divide for three major drainage systems, namely, the Wild Rice drainage system which flows north into North Dakota; the Mississippi drainage system which flows east into Minnesota, and the Missouri drainage system which flows west into the James River.

Sometimes the snow melt or summer storms cause much damage in these drainage systems or watersheds. The people of these areas are very conscious of this fact and are now taking measures for self-protection through the Watershed and Flood Prevention Act.

At the present time there are four watershed associations being organized in this area, namely the upper Minnesota River watershed, comprising 38,160 acres in Marshall and Roberts Counties, S. Dak.; the Veblen watershed, comprising 115,000 acres in Marshall and Roberts Counties, S. Dak., and Sargent County, N. Dak.; the upper Crow Creek watershed, comprising 236,000 acres in Marshall County; the Wild Rice Creek watershed, comprising 235,522 acres in Marshall County, and in Sargent County, N. Dak.

I might say, Mr. Chairman, when the Select Committee on Water Resources held its hearings in South Dakota last fall, more farmers took time from their corn picking and other fall chores to come in to testify as to their interest in the small watersheds program than in any other single feature of the water problems.

I commend these watershed projects to you wholeheartedly, and I hope they may all be favorably considered.

The protection that these four watersheds will give the siltation problems connected with the river alone is worthy of note and may be one of the major factors in determining the long-time use of the James River and the dams through which it will operate.

Since the Garrison diversion unit is composed of many more or less small units independent of each other, I urge that the Oahe unit, the study of which is nearly completed be finished as rapidly as possible and a report made of its full development.

This unit will supply the water for irrigation to the 54,000 acres in South Dakota. This is a very rich and fertile section of our State and I trust every effort will be made to hasten its completion.

TRANSMISSION FACILITIES

I support the request for $6,796,000 for the erection of transmission lines from Fort Thompson to Watertown, from Oahe Dam to Fort Thompson, from Fort Randall to Sioux City and for additions to the Huron and Watertown substations. This work is necessary for the proper operation and distribution of the power generated at the several dams and should be completed as soon as possible in order that the Government may get the returns from the sale of the electricity.

I thank you, Mr. Chairman.

Chairman HAYDEN. Thank you.

BUREAU OF RECLAMATION

STATEMENT OF F. M. DOMINY, COMMISSIONER, BUREAU OF RECLAMATION, ACCOMPANIED BY N. B. BENNETT, W. I. PALMER, A. R. GOLZÉ, B. G. DAVIS, D. R. BURNETT, G. G. STAMM, AND D. S. CAMPBELL

CONSTRUCTION AND REHABILITATION

Chairman HAYDEN. We will now consider the request for the "Construction and rehabilitation" appropriation. The budget provides for a construction program, exclusive of the Colorado River storage and participating projects, totaling $184,820,750. This program will be financed with new obligational authority of $173,950,000, the use of $870,750 of prior year funds and an initial underfinancing of $10 million. The general statements in the justifications pertaining to this appropriation will be included in the record.

JUSTIFICATION

(The justification follows:)

CONSTRUCTION AND REHABILITATION—GENERAL STATEMENT

SUMMARIZED FINANCIAL DATA

Fiscal year 1960:	
Appropriation	$132,466,171
Advances from non-Federal sources	83,326
Application of prior year funds	8,352,140
Balance available in subsequent years	−1,074,628
Total obligation program, fiscal year 1960	[1] 139,827,009
Fiscal year 1961:	
Appropriation	173,950,000
Application of prior year funds	1,074,628
Balance available in subsequent years	−203,878
Total obligations, fiscal year 1961	[2] 174,820,750

[1] Excludes initial underfinancing of $4,928,388.
[2] Excludes initial underfinancing of $10 million.

The Bureau is requesting $173,950,000 for construction and rehabilitation in fiscal year 1961. This amount, plus $870,750 of prior year funds and $10 million initial underfinancing will provide for a total program of $184,820,750. The $203,878 to be used after fiscal year 1961 consists of $117,000 for work on the Soap Lake Protective Works of the Columbia Basin project and $86,878 for further studies on the All-American canal.

This program, for work in fiscal year 1961, will finance contract earnings and associated costs on 30 regular projects, 19 units and divisions of the Missouri River Basin project, and the rehabilitation and betterment activity.

Included in the fiscal year 1961 program is $4,173,000 covering four new construction starts. These are Vale project, Bully Creek extension, Oregon; Lower Rio Grande rehabilitation project, La Feria division, Texas; Almena unit, Kansas, of the Missouri River Basin project; and Yellowtail unit, Montana and Wyoming, also of the Missouri River Basin project.

The Missouri River Basin project program as presented herein includes the Fort Peck project program as a part of the Transmission division. Of the projects under construction in fiscal year 1961, nine regular projects and six Missouri River Basin project units are grouped under the drainage and minor construction category because of their relatively limited programs. Included also is an amount of $2 million for continuation of investigations and advance planning in connection with the Missouri River Basin project, consisting of surveys and investigations to establish plans for future developments, $3 million for the activities of other Department of Interior agencies participating in the Missouri River Basin program, and $254,000 for advance planning on authorized regular projects.

The fiscal year 1961 program contemplates the continuation of construction on all active projects at a rate consistent with efficient and orderly construction. To a large extent this rate is established by the estimated earnings of contractors operating under construction contracts awarded in prior years. Since construction of Bureau projects extends over a number of years, it is not possible to directly relate 1 year's work to accomplishments in terms of water for new land or kilowatts of generating capacity. Continuation of construction activities during 1961 at the rate provided in the estimate will result in making available water for the irrigation of 63,600 acres of new land and 61,200 acres of land now receiving an inadequate supply. Hydroelectric generating capacity will be increased by 48,000 kilowatts. To a large extent these accomplishments reflect the application of appropriations in previous years while the result of 1961 appropriations will be felt in the years following.

A small program for the rehabilitation of existing projects which have become obsolete or badly deteriorated is also provided for in the estimate. New 1961 appropriations of $3,609,000 are included in the overall construction and rehabilitation estimate to finance rehabilitation work on 10 projects.

The following table shows the allocation of appropriations for fiscal year 1960, and the proposed allocation of the fiscal year 1961 appropriation estimate

DEPARTMENT OF THE INTERIOR—BUREAU OF RECLAMATION

Construction and rehabilitation

Activity	Fiscal year 1960				Fiscal year 1961		
	Appropriation	Prior year funds programed	Initial under-financing	Total obligations	Appropriation	Prior year funds programed	Total obligations
Advance planning					$254,000		$254,000
Gila project, Arizona	$3,304,305	[1] $94,228		$3,398,533	4,219,000		4,219,000
Colorado River front work and levee system, Arizona-California	370,500	[2] −137,589		232,911	769,500	$250,500	1,020,000
Boulder Canyon project, Arizona-Nevada	2,754,375	24	$73,125	2,827,524	2,857,000		2,857,000
Central Valley project, California	40,373,554	1,173,446	1,946,341	43,493,341	61,306,100		61,306,100
Collbran project, Colorado	4,295,730	66,465	91,770	4,453,965	5,140,000		5,140,000
Minidoka project, North Side pumping division, Idaho	797,550	36,773		834,323	429,000		429,000
Palisades project, Burns Creek Dam and powerplant, Idaho	487,500	[2] −487,500				487,500	487,500
Washoe project, Nevada-California	678,750	340,830		1,019,580	3,137,000		3,137,000
McMillan Delta project, New Mexico	29,250	170,868	99,250	299,368	100,000		100,000
Middle Rio Grande project, New Mexico	1,316,250	295,595	178,750	1,790,595	1,729,000		1,729,000
Washita Basin project, Oklahoma	9,289,304	91,248		9,380,552	6,960,000		6,960,000
Crooked River project, Oregon	2,684,175	47,525		2,731,700	2,235,000		2,235,000
Rogue River Basin project, Talent division, Oregon	2,367,093		312,000	2,679,093	2,450,000		2,450,000
Vale project, Bully Creek extension, Oregon					173,000		173,000
Klamath project, Oregon-California	508,950	102,133		611,083	868,000		868,000
Lower Rio Grande project, La Feria division, Texas					500,000		500,000
Lower Rio Grande project, Mercedes division, Texas	1,394,250	4,717	68,250	1,467,217	2,500,000		2,500,000
San Angelo project, Texas	3,657,611	239,026	242,389	4,139,026	11,000,000		11,000,000
Provo River project, Utah	518,700	265,000	97,500	881,200	825,000		825,000
Weber Basin project, Utah	4,961,190	115,958		5,077,148	8,283,000		8,283,000
Chief Joseph Dam project, Greater Wenatchee division, Washington	414,375			414,375	2,000,000		2,000,000
Columbia Basin project, Washington	7,427,705	24,845		7,452,550	6,100,000		6,100,000
Drainage and minor construction	2,821,511	2,146,546	639,408	5,607,465	921,120	6,000	927,120
Rehabilitation and betterment of existing projects	3,412,500	[3] 79,049		3,491,549	3,609,000	126,750	3,735,750

See footnotes at end of table, p. 440.

Construction and rehabilitation—Continued

Activity	Fiscal year 1960				Fiscal year 1961		
	Appropriation	Prior year funds programed	Initial under-financing	Total obligations	Appropriation	Prior year funds programed	Total obligations
Missouri River Basin:							
Ainsworth unit, Nebraska		$136,932		$136,932	$1,500,000		$1,500,000
Almena unit, Kansas					1,000,000		1,000,000
Bostwick division, Nebraska-Kansas	$2,147,925	28,395		2,176,320	821,000		821,000
Cedar Bluff unit, Kansas	331,500	2,118		333,618	1,400,000		1,400,000
East Bench unit, Montana	300,000		$200,000	500,000	2,800,000		2,800,000
Farwell unit, Nebraska	2,778,750	91,410	146,250	3,016,410	7,700,000		7,700,000
Frenchman-Cambridge division, Nebraska	4,009,134	61,750		4,070,884	5,439,000		5,439,000
Glendo unit, Wyoming	1,571,300	1,049,231		2,620,531	775,280		775,280
Helena Valley unit, Montana	2,029,950	30,002		2,059,952	565,000		565,000
Owl Creek unit, Wyoming	982,663	17,412		1,000,075	455,000		455,000
Transmission division, various	16,635,684	553,346	771,930	17,960,960	24,415,000		24,415,000
Webster unit, Kansas	2,793,375	36,812		2,830,187	617,000		617,000
Yellowtail unit, Montana-Wyoming		15,000		15,000	2,500,000		2,500,000
Drainage and minor construction	567,450	420,300	61,425	1,049,175	598,000		598,000
Investigations	775,000	[4] 126,371		901,371	656,000		656,000
Advance planning	1,053,125	99,323		1,152,448	1,344,000		1,344,000
Subtotal, Missouri River Basin, Bureau of Reclamation	35,975,856	2,668,402	1,179,605	39,823,863	52,585,280		52,585,280
Other Department of the Interior agencies:							
Fish and Wildlife	233,025	212		233,237	280,000		280,000
Geological Survey	1,659,450	10,492		1,669,942	1,890,000		1,890,000
Bureau of Indian Affairs	174,037	2,917		176,954	196,400		196,400
Bureau of Land Management	207,675	3,070		210,745	249,600		249,600
Bureau of Mines	122,850	76		122,926	140,000		140,000
National Park Service	228,150	6,482		234,632	244,000		244,000
Subtotal, other agencies	2,625,187	23,249		2,648,436	3,000,000		3,000,000
Total, Missouri River Basin	38,601,043	[4] 2,691,651	1,179,605	42,472,299	55,585,280		55,585,280
Subtotal, construction and rehabilitation	132,466,171	[5] 7,360,838	4,928,388	144,755,397	183,950,000	$870,750	184,820,750
Undistributed reduction based on anticipated delays				−4,928,388	−10,000,000		−10,000,000
Total, construction and rehabilitation				139,827,009	173,950,000	870,750	174,820,750

[1] Includes $25,000 non-Federal advances.
[2] Includes reductions from appropriated funds programed in fiscal year 1961.
[3] Includes $8,326 non-Federal advances.
[4] Includes $50,000 contributions.
[5] See footnotes 1, 3, and 4.

COMMITTEE PROCEDURE

Chairman HAYDEN. It is the view of the Chair that it is not necessary to go into the details on a number of the going projects. However, as we come to these projects, members of the subcommittee may desire to ask some questions, and we will expect the officials of the Bureau to advise the committee of any new developments on any of the projects.

Senator CASE. Mr. Chairman, I wonder if you would indulge me for just a moment to say something about the Commissioner of Reclamation?

Chairman HAYDEN. Certainly.

Senator CASE. Mr. Chairman, as you know, I have been either on the House side or Senate side for quite some time here and during that time it has been my privilege to be acquainted with several Commissioners of Reclamation. As nearly as I can recall, with the possible exception of Mr. Bashore, this is the best example of a career man succeeding to the top position of the Bureau of Reclamation that I remember.

I have known Mr. Floyd Dominy for a number of years and have always found him deeply interested in really getting results in the work of the Bureau.

I was most pleased when he was named to be Commissioner, and I am sure that you share with me a high regard for this policy of taking people who have grown up in the service, so to speak, and giving them, I guess I had better put it the other way, giving the country the opportunity of having the benefit of their training and broad experience.

Chairman HAYDEN. You are correct about that, sir.

Mr. DOMINY. Thank you very much, Senator Case. I deeply appreciate those remarks.

ADVANCE PLANNING

Chairman HAYDEN. The budget includes a program of $254,000 for "Advance planning." In previous years, funds for this purpose have been carried in the "General investigation" appropriation.

JUSTIFICATION

The justifications will be included in the record.

(The justifications follow:)

CONSTRUCTION AND REHABILITATION

ADVANCE PLANNING

Summarized financial data

Total obligations, fiscal year 1960	[1] $164,142
Allotment, fiscal year 1961	254,000
Total obligations	254,000

[1] During fiscal year 1960, advance planning is being financed from the "General investigations" appropriation.

Purpose of program.—Subsequent to authorization of a Bureau of Reclamation project, additional detailed studies are generally required to refine the findings of the feasibility report and evolve a definite plan of development prior to start of construction. The major portion of this work consists of the collection of final

design data, the preparation of final designs and specifications and completion of the definite plan report. It also includes negotiations with local interests leading to execution of repayment contracts. This advance planning program will provide funds for detailed preconstruction studies on authorized projects awaiting construction funds, exclusive of units of the Missouri River Basin project and the Colorado River storage project and participating projects. During fiscal year 1961, advance planning will be under way on the following projects:

SPOKANE VALLEY PROJECT, WASHINGTON

Location and description.—The Spokane Valley project is located along the banks of the Spokane River between the city of Spokane and the Washington-Idaho State boundary. The project will involve construction of pumping plants, wells and pipe distribution systems to serve some 10,290 acres of land of which about 8,370 acres are currently being irrigated.

Authorization.—Public Law 86–276, 86th Congress, 1st session.

Cost of investigations

Total estimated cost preconstruction planning		$199,100
Estimated cost to June 30, 1960		99,100
Fiscal year 1961 program		100,000
Planning allocation	$100,000	
Balance to complete		
Total estimated project cost		5,100,000

Fiscal year 1961 program.—During fiscal year 1961, detailed preconstruction surveys to collect final design data and preparation of designs and specifications will be underway leading to completion of the definite plan report by June 30, 1961.

Justification.—At the present time, some 8,370 acres of the Spokane Valley project are being served by a gravity water supply system diverting from the Spokane River. Most of these facilities have been in operation for many years and the water users are now faced with prohibitive costs of operation and maintenance. In addition, the condition of the main canal has deteriorated to the point that there is danger of a section of the canal being lost because of its precarious location on a steep alluvial bank above the river; and several flumes in the main canal are urgently in need of replacement to insure continued operation of the project. Under the proposed plan of development for the Spokane Valley project, the gravity supply system would be replaced by a pressure pipe distribution system utilizing ground water supplies. In addition, the project would develop some 1,920 acres of new land which would contribute to the economy of the area.

WASHOE PROJECT, INITIAL PHASE, NEVADA-CALIFORNIA

Location and description.—The Washoe Project, initial phase, is located in western Nevada and eastern California in the general vicinity of Reno and Carson City, Nev. This multipurpose project will consist of Stampede, Prosser, and Watasheamu Dams and Reservoirs, 2 powerplants with 34,500 kilowatts of installed powerplant capacity, and canals and laterals to provide a full water supply for 8,790 acres of new land and a supplemental water supply for 43,680 acres of land in need of additional water for maximum production. Drainage facilities will be provided for some 15,000 acres of land on which production is now curtailed because of waterlogging. The project will also provide flood control, recreation, and fish and wildlife benefits. Prosser Creek Dam and Reservoir is now under construction.

Authorization.—Public Law 858, 84th Congress, 2d session and Public Law 85–706, 85th Congress, 2d session.

Cost of investigations

Total estimated cost preconstruction planning		$1,820,000
Estimated cost to June 30, 1960		1,605,591
Fiscal year 1961 program		149,000
Planning allocation	$149,000	
Balance to complete		65,409
Total estimated project cost		[1] 52,245,000

[1] Includes Prosser Dam and Reservoir now under construction.

Fiscal year 1961 program.—During fiscal year 1961 detailed surveys and studies will be continued leading to completion of the definite plan report by September 1961. Repayment negotiations also will be continued.

Justification.—Better regulation of the available water supply in the Washoe project area is urgently needed. The runoff of the Truckee and Carson Rivers is formed largely from melting snows of the high Sierra Nevada and occurs as torrential floods in the spring but drops sharply after midsummer. The high spring flood flows which are presently unused cause extensive damage along the shoreline of Lake Tahoe and to the cities of Reno and Sparks and inundate farmland in both the Truckee and Carson River Basins. At the same time, there are thousands of acres of farmland which are now producing only part of their full potential because of late season water shortages. Also, surplus ground water within the project area menaces health and property in the vicinity of Reno and Sparks and seriously hinders crop production on a substantial part of the project area. In addition, demands for electrical energy have far outgrown the available supply and large amounts of power must be imported across the high Sierra Nevada from California. Construction of the Washoe project would provide supplemental water for land now suffering from an inadequate supply, urgently needed flood protection and hydroelectric energy to meet the needs of the rapidly growing area.

TRINIDAD PROJECT, COLORADO

Location and description.—The Trinidad project is a proposed multipurpose development of the Corps of Engineers. It would consist of the Trinidad Dam and Reservoir on Purgatoire River about 4 miles upstream from the city of Trinidad, Colo. The project would provide flood protection for the city of Trinidad and the agricultural area in the vicinity. The project also would provide a supplemental water supply for about 19,500 acres of land. The Bureau of Reclamation has the responsibility of negotiating repayment contracts for the reimbursable costs allocated to irrigation.

Authorization.—Authorized for construction by the Corps of Engineers by the Flood Control Act of 1958.

Cost of investigations

Total estimated cost preconstruction planning		$244,500
Estimated cost to June 30, 1960		226,387
Fiscal year 1961 program		6,113
Planning allocation	$5,000	
Stores on hand, etc	1,113	
Balance to complete		12,000
Total estimated project cost		Not applicable

Fiscal year 1961 program.—A report on the irrigation phase of the project which will serve as a basis for the repayment arrangements will be completed by June 1960. The fiscal year 1961 program will provide for continuation of discussions and negotiations with the local interests, Corps of Engineers, and Arkansas River Compact Commission.

Justification.—The Purgatoire River has been subject to periodic floods in the past which have caused extensive damage to the city of Trinidad and the farmlands in the area. Control of the inadequate and highly erratic flows of the river also is needed to insure a full and dependable water supply for the presently irrigated land. In addition, the economy of the area has been largely based on coal mining operations in the area. Virtually all mining operations have been suspended and the local economy has been declining in recent years. Improvement of farming operations through supplemental water would contribute materially toward stabilizing the local economy.

SCHEDULE OF CONSTRUCTION PROGRAM, FISCAL YEARS 1960 AND 1961

Advance planning

Program item	Estimated total	Total to June 30, 1959	Program current year 1960	Program budget year 1961	Balance to complete
1	2	3	4	5	6
Advance planning:					
Region 1:					
Chief Joseph Dam project, Greater Wenatchee division, Washington	$300,885	$299,237	$1,648		
Spokane Valley project, Washington-Idaho	199,100	99,100		$100,000	
Region 2: Washoe project, initial phase, California-Nevada	1,820,000	1,502,346	103,245	149,000	$65,409
Region 5:					
Canadian River project, Texas	509,994	470,190	39,804		
Lower Rio Grande rehabilitation project, La Feria division, Texas	39,010	26,510	12,500		
Region 7: Trinidad project, Colorado	244,500	199,979	26,408	6,113	12,000
Adjustments	−2,784,080	−2,597,362	−183,605	−513	−2,600
Service facilities				−600	600
Total expenditures	329,409			254,000	75,409
Unliquidated obligations					
Total obligations	329,409	(1)	(1)	254,000	75,409
Method of financing:					
Funds available					
Funds required				254,000	75,409

[1] Included in the "General investigations" appropriation in these years.

PROGRAM PROJECTS

Chairman HAYDEN. What projects are included in this program?

Mr. DOMINY. Spokane Valley project is the first on the list, Mr. Chairman.

Now, I want the committee to know that we have run into a problem on the Spokane Valley project. Shortly after it was authorized we learned that two of the districts that had expected to participate were doubtful of really wanting to follow through. We have run that down, and we now know that two of the districts that are largely urban in character, that is, suburban in character—they have been moving more and more into residential property as contrasted to full-time operating farms—now feel that they do not want to participate in this project.

So we are going to have to come back to the Congress for a revision in the project plan and for a reauthorization of the project.

Another one in this list is the Washoe project, initial phase, on which we are constructing the Prosser Creek Dam and Reservoir which is a flood control and fish and wildlife conservation feature of this multiple-purpose project.

The rest of the project plan, the irrigation features, are not ready to go as yet because we still have not worked out our final repayment arrangements and details of how the water users will participate in the repayment aspect.

Chairman HAYDEN. As I recall the Prosser Creek feature of the project is a feasible flood control project.

Mr. DOMINY. Yes, sir; the Prosser Creek Dam and Reservoir standing on its own would supplement the work of Corps of Engineers—floodways and levees which they have done in the vicinity of Reno—and will give the needed additional flood protection in this area.

The Trinidad project, Colorado, is a proposed multiple-purpose development of the Corps of Engineers. It would consist of the Trinidad Dam and Reservoir on Purgatory River about 4 miles up stream from the city of Trinidad. So far as the Bureau of Reclamation is concerned we have the obligation of negotiating repayment contracts for this project and that is why it is in our budget.

That is all that is under this heading in this year's program.

GILA PROJECT, ARIZONA

Chairman HAYDEN. The budget program includes $4,219,000 for the Gila project.

The justifications will be included in the record.

(The justifications follow:)

PF-45
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Colorado Basin - in Southwestern Arizona, in the Southern part of Yuma County, in the vicinity of Yuma.

AUTHORIZATION Emergency Relief Act 1935 (48 Stat. 115) and Subsequent acts. **B/C RATIO** Not Available **Date**

LAND CERTIFICATION None required. **DEFINITE PLAN REPORT** None required.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 67,520,000	Appropriations to June 30, 19 59	$ 54,078,366
Net Property and Other Transfers	-4,382,305	Appropriations for F. Y. 19 60	3,304,305
Cash Advances--Non-Federal	25,000	Appropriations to Date	57,382,671
Adjustment	1/ 2,321,500	Initial Underfinancing F. Y. 19 60	
		Appropriations Required for F. Y. 1961	4,219,000
Total to be Allocated	$ 65,484,195	Balance to Complete after F.Y. 19 61	$ 5,918,329

ALLOCATIONS 5/

Irrigation	$ 58,944,979
Power	
M. & I. Water	
Flood & Nav.	
Other 3/	6,539,216
Total	$ 65,484,195

REPAYMENT 2/

Amount Repaid by Irrigators	$ 58,944,979
Amount Repaid by Power	
Amount Repaid by M. & I. Water	
Non - Reimbursable 3/	6,539,216
Total	$ 65,484,195

AMOUNTS PER ACRE 4/

Irrig. Invest. per Acre	$ 570
Repayment of Investment per acre:	
By Irrigators	$ 570
By Power Revenues	
By M.& I.Water Users	
Payment Capacity per Acre	$ 36.16
Annual Charges:	
O. & M.	$ 17.00
Construction	9.50
Total	$ 26.50

STATUS OF REPAYMENT CONTRACT: Executed March 4, 1952 with Wellton-Mohawk Irrigation and Drainage District. Amendatory Contract executed September 1, 1959. Executed December 22, 1952 with Unit "B" Irrigation and Drainage District. Executed May 12, 1953, amended and supplemented June 24, 1954 with North Gila Valley Irrig. Dist. Executed May 26, 1956 with Yuma Mesa I. & D. D.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
(SEE ATTACHED SHEET)							

Acreage Full Supply 103,449 Supplemental Supply — Total Acres 103,449 Power kw None

Region	Date	Project and State
3	1/18/60	Gila Project, Arizona

ER-104

Footnotes appear on following page.

Principal features

Item	Size or capacity	Completion	
		Percent, Jan. 1, 1960	Date
Project common features:			
Completed works		100	November 1952.
North Gila drain No. 3 extension		100	June 1959.
Yuma Mesa division:			
Completed features		100	June 1948.
Yuma Mesa pumping station ---horsepower--	6,825	98	September 1961.
Yuma Mesa unit drainage		28	June 1963.
Water users facilities		95	June 1960.
South Gila distribution and drainage system (investigations).		3	June 1962.
Wellton-Mohawk division:			
Completed works		100	December 1953.
Pumping plants Nos. 1, 2, and 3 ---horsepower--	6,000–15,000	97	June 1961.
Wellton-Mohawk Canal ---miles--	18	98	June 1963.
Mohawk Canal ---do---	44	99	Do.
Wellton Canal ---do---	15	98	Do.
Wellton-Mohawk division laterals ---acres--	75,000	99	June 1961.
Wellton-Mohawk drainage facilities		5	June 1967.
Drainage and minor construction work		2	June 1962.

[1] Adjustment represents $1,664,247, Gila project's share of Imperial Dam construction costs, a credit of $456,090 cost allocation assumed by unit "B" Yuma auxiliary project's share of Gila project cost, $1,023,076 of property transfers and other charges funded, $14,235 loss on excess stores, and $76,032 of other physical property.

[2] Repayment period 60 years.

[3] Nonreimbursable irrigation costs authorized by sec. 3 of the act of January 28, 1956 (70 Stat. 5), $6,019,938 plus construction by Corps of Engineers, with funds provided by U.S. Air Force of $372,845. Also includes revenues of $121,433 and $25,000 cash advances.

[4] Represents computed average payment capacity and annual operation and maintenance for Wellton-Mohawk division, based on index of 250 for prices received and 265 for prices paid. Study made in March 1959.

[5] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$54,105,621	$58,944,979
Other		6,539,216
Total to be allocated	54,105,621	65,484,195

Total to be allocated is increased by addition of Wellton-Mohawk drainage system and by South Gila Valley drainage investigations. These costs are all allocable to irrigation. "Other" item represents a chargeoff authorized by the Congress and the cost of property financed by the U.S. Air Force, revenues, and cash advances. Technically these costs are irrigation costs but are isolated in this justification for clarity or presentation.

NOTE.—Data for benefit-cost computation not available inasmuch as construction of Gila Project was commenced before benefit-cost ratio was adopted as indication of project justification.

Agricultural production, present and future

The principal agricultural products produced as a result of irrigation are cereal and forage crops along with vegetables and cotton.

JUSTIFICATION

Description.—The project is located in southwestern Arizona. Its primary purpose is to provide a full water supply to 103,449 acres of arid lands within the project and to 3,406 acres in the Yuma auxiliary project. Four main canal pumping plants are required to deliver water to the distribution systems.

Appropriation title.—Construction and rehabilitation.

WORK PROPOSED, FISCAL YEAR 1961

Yuma Mesa division

Yuma Mesa unit drainage facilities, $10,000.—The program provides for continued drainage investigations studies to determine requirements to control rising ground-water conditions.

South Gila distribution and drainage system investigations, $70,000.—For continued survey and investigations for a distribution and drainage system for the South Gila Valley which is presently irrigated from wells.

Wellton-Mohawk division

Pumping plants Nos. 1, 2, and 3, $4,540.—For minor cleanup work.

Wellton-Mohawk canal, $10,000.—The program provides for continuation of repairs to broken concrete and canal lining.

Mohawk Canal, $10,000.—Repairs to damaged concrete canal lining will continue.

Wellton Canal, $10,000.—For continued repairs to damaged concrete canal lining.

Wellton-Mohawk division lateral system, $2,500.—For completion of cleanup work.

Wellton-Mohawk drainage facilities, $4,015,000.—The program provides for completion of construction on the Wellton-Mohawk main conveyance channel and continuation of work on drainage wells, tile drains and collector drains.

Drainage and minor construction work, $58,464.—The program provides for flood channel clearing, canal lining repairs, structure modification, etc., by the Wellton-Mohawk irrigation and drainage district under a drainage and minor construction work contract.

Service facilities, depreciation and salvage, —$3,000.—The program provides for the acquisition of minor service facilities. These are more than offset by the costs from prior years to be distributed to features during the year.

Other project costs, $17,000.—This provides for the settler assistance program.

Consolidated expenditures and credits, $14,496.—Represents adjustment due to revenues from farming operations and miscellaneous services credited to cost, offset in part by Solicitor's and other charges which do not require funds from this appropriation.

Change in total obligations	*Obligations*
1960 congressional justification	$56, 100, 000
1961 congressional justification	67, 545, 000
Increase	11, 445, 000

The increase is due primarily to the inclusion of an estimate of $11,325,000 for construction of a drainage system in the Wellton-Mohawk division, including a main conveyance channel, wells, tile drains and collector drains. Also included is an estimate of $120,000 for investigations in the South Gila Valley for a distribution and drainage system.

WELLTON-MOHAWK DRAINAGE FACILITIES

Chairman HAYDEN. The request includes $4,615,000 for the Wellton-Mohawk drainage facilities. Will this sum complete these facilities?

Mr. DOMINY. No, sir; we have a continuing item over into 1962 and 1963 on this drainage work. The 1961 program together with what is being carried out with the money available in 1960 would bring them about three-fourths of the way to completion, and we will need about $1,300,000 roughly in fiscal year 1962 and our estimate is about $1,250,000 in fiscal year 1963.

Chairman HAYDEN. Of course the drainage situation that developed was of an emergency nature. If steps had not been taken immediately to correct the situation, we could have lost a substantial block of fine lands.

Mr. DOMINY. That is exactly true, Mr. Chairman.

As we pointed out last year and we certainly appreciate the cooperation we had from the committees of Congress in moving this a year or two ahead by putting this item in the budget last year on rather short notice, but this problem did come to light much faster on the Wellton-Mohawk lands than any of us had realized or anticipated it would. It was necessary to get in here with an expanded program, an expedited program in order to keep those very excellent

soils from going bad and we think we have that pretty well headed off with a good start on the main conveyance drainage channel and with the necessary wells that will pump from the localized areas of water concentration and lift water into the conveyance channel.

Chairman HAYDEN. Why is it necessary to use wells rather than drainage ditches?

Mr. DOMINY. Well, you had the problem of the Gila River being a pretty poor water course, as you know. It has been so erratic in flow, and it is so difficult to keep the channels opened up, the river slope is so flat, in any event, we were afraid if we put the drainage water into the Gila River that it would damage the adjacent farmland by not draining away sufficiently rapid. By having this lined conveyance channel which, of course, will be in a direct line and have a correct fall to evacuate the water rapidly, and then pump from the seeped areas and put this very saline drainage water into a lined conveyance canal we will be able to drain and evacuate the saline water without doing any damage to good land.

COLORADO RIVER FRONT WORK AND LEVEE SYSTEM

Chairman HAYDEN. The budget program includes $769,500 for the Colorado River front work and levee system.

The justifications will be included in the record.

(The justifications follow:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Southwestern Arizona at the confluence of the Gila and Colorado Rivers, near Yuma, Arizona

AUTHORIZATION Act of June 28, 1946 and subsequent acts. | B/C RATIO None | Date

LAND CERTIFICATION None Required | DEFINITE PLAN REPORT None Required

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 2,051,000	Appropriations to June 30, 19 59	$ 281,000
Net Property and Other Transfers	-	Appropriations for F. Y. 19 60	370,500
Cash Advances--Non-Federal	-	Appropriations to Date	651,500
Adjustment	-	Initial Underfinancing F. Y. 19	
		Appropriations Required for F. Y. 19 61	769,500
Total to be Allocated	$ 2,051,000	Balance to Complete after F.Y. 19 61	$ 630,000

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$	Amount Repaid by Irrigators	$	Irrig. Invest. per Acre	$
Power		Amount Repaid by Power		Repayment of Investment per acre:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$
Flood & Nav. Protection Work	2,051,000	Non - Reimbursable	2,051,000	By Power Revenues	
Total	$ 2,051,000	Total	$ 2,051,000	By M. & I. Water Users	
				Payment Capacity per Acre	$
				Annual Charges: O. & M.	$
				Construction	
				Total	$

STATUS OF REPAYMENT CONTRACT: No repayment contract required. However, in accordance with the conference report on the F.Y. 1960 Appropriation bill agreement has been reached with the irrigation districts concerned to reimburse the Bureau for their share of operating and maintaining the drain from Gila siphon to Colorado River.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
So. Gila Drainage Facilities	4.9 miles	90	6-60				
Drainage Channel-Gila Siphon to Colorado River	8.2 miles	0	9-61				

Acreage Full Supply ____ Supplemental Supply ____ Total Acres ____ Power kw ____

Region	Date	Project and State
3	1/18/60	Colorado River Front Work and Levee System, Arizona-California

BR-109

JUSTIFICATION

Description.—The work is located in southwestern Arizona at the confluence of the Gila and Colorado Rivers. The purpose of the currently scheduled work is to provide a drain starting at the Gila River siphon to carry the drainage water from all of the Arizona irrigation districts in the Yuma area, some seepage water from the Gila gravity main canal, some Gila River water that enters the eastern end of the Wellton-Mohawk division, Gila project, and probably some Colorado River water that will seep into the drain from the north to the Colorado River.

Appropriation title.—"Construction and rehabilitation."

Work proposed, fiscal year 1961:

Drainage channel-Gila siphon to Colorado River, $1,020,000.—The program provides for the initiation of construction of the drainage channel, for completion of rights-of-way transactions, and for minor contracts.

Change in total obligations

	Obligations
1960 congressional justification	$281,000
1961 congressional justification	2,051,000
Increase	1,770,000

The full amount of the increase is due to the addition of the estimated cost of constructing a deep open drain evacuation channel from the Gila River siphon to the Colorado River.

DRAINAGE CHANNEL

Chairman HAYDEN. Will the sum requested complete the drainage channel from the Gila siphon to the Colorado River?

Mr. DOMINY. It won't quite complete it. We have a small item carrying over in 1962, Mr. Chairman, about $630,000, we show as a balance to complete after fiscal year 1961.

SOUTH GILA VALLEY

Chairman HAYDEN. How effective have the facilities for the protection of the South Gila Valley been?

Mr. DOMINY. We have been a little disappointed, frankly.

The toe drain that we put in along the escarpment below the mesa there, we had expected would collect this water that was coming down underground from the mesa and raising the water table to damaging levels in the South Gila Valley. But apparently a considerable portion of that water is coming down underneath that drain and coming up to the surface beyond the drain.

Chairman HAYDEN. I looked at that last year when I was home. A very unexpected thing happened.

Mr. DOMINY. It was indeed. We had anticipated from all of our studies that the interceptor drain would pick that up but it hasn't done so with complete success, so we will have to supplement that with some drainage wells.

This isn't completely not to be expected but it was quite a surprise that we did not gather up a higher portion of the water with the toe drain itself.

Chairman HAYDEN. You think you can do that with pumps, sir?

Mr. DOMINY. Yes; we are quite positive that we can successfully drain the area.

Chairman HAYDEN. What will be the nature of the additional facilities?

Mr. DOMINY. Well, our tests indicate from a controlled pumping test on one irrigation well that pumping from the underlying aquifer

to reduce pressure gradients is effective in lowering the surface ground water.

And we propose to install three wells of about 2,700 gallons per minute capacity each, and 3 miles of lined discharge channel to the Gila River for a total estimated cost of $100,000.

Chairman HAYDEN. The water lift is not very great, is it?

Mr. DOMINY. No; it is quite a shallow pump lift.

BOULDER CANYON PROJECT, ARIZONA-NEVADA

Chairman HAYDEN. The budget program includes $2,857,000 for the Boulder Canyon project.

The justifications will be included in the record.

(The justification follows:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Colorado River Basin--On the Arizona-Nevada States boundary, in Mohave County, Arizona and Clark County, Nevada.

AUTHORIZATION: Act of December 21, 1928 — B/C RATIO: None--Construction initiated prior to requirement

LAND CERTIFICATION: None required — DEFINITE PLAN REPORT: None--Construction initiated prior to D.P.R. requirement

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 167,063,996	Appropriations to June 30, 1959	$ 160,664,256
Net Property and Other Transfers	-1,200,000	Appropriations for F. Y. 1960	2,754,375
Cash Advances--Non-Federal	271,004	Appropriations to Date	163,418,631
Adjustment	1/ 191,700	Initial Underfinancing F. Y. 1960	73,125
Interest during Construction	8,600,000	Appropriations Required for F. Y. 19 61	2,857,000
Total to be Allocated	$ 174,932,700	Balance to Complete after F.Y. 19 61	$ 715,240

ALLOCATIONS 6/

Irrigation	$
Power	146,524,218
M. & I. Water	
Flood & Nav.	25,000,000
Non Project 2/	3,408,482
Total 3/	$ 174,932,700

REPAYMENT

Amount Repaid by Irrigators	$
Amount Repaid by Power 4/	171,524,218
Amount Repaid by M. & I. Water	
Non - Reimbursable 2/	3,408,482
Total 3/	$ 174,932,700

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$
Repayment of Investment per acre:	
By Irrigators	$
By Power Revenues	
By M.& I. Water Users	
Payment Capacity per Acre	$
Annual Charges:	
O. & M.	$
Construction	
Total	$

STATUS OF REPAYMENT CONTRACT:

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Hoover Dam & Reservoir	29,827,000AF	100	9-35	General Property Boulder City			
Hoover Powerplant	1,344,800KW	91	11-61	investment transferred to			
Hoover Switchyard	1,441,850Kva	90	11-61	Boulder City Municipal			
Permanent operating facilities				Office	--	99	5/
Dam and Reservoir	--	99	6-61				
General Property Investment re-							
tained by Boulder Canyon Project	--	100	7-58				

Acreage Full Supply -- Supplemental Supply -- Total Acres -- Power kw 1,344,800

Region	Date	Project and State
3	1-15-60	Boulder Canyon Project, Arizona-Nevada

BR-112

1 Represents $191,700 in capitalized additions to Boulder City subsequent to July 1, 1952.

2 The Interior Department Appropriation Act, 1949 (Public Law 841, 80th Cong., act of June 29, 1948) authorizes and directs the diminution annually of the long-term debt obligation based on advances and readvances to the Colorado River dam fund in amounts equal to those which are determined to be nonproject investments and expenditures.

3 Includes $8,600,000 interest during construction.

4 Includes $25,000,000 deferred for flood control.

5 Separation of Boulder City accomplished on Jan. 4, 1960.

6 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Power	$147,823,447	$146,524,218
Flood control	25,000,000	25,000,000
Nonproject	3,353,253	3,408,482
Total to be allocated	176,176,700	174,932,700

Total to be allocated is decreased because of a reduction in estimated obligations to be incurred in construction of Hoover powerplant unit N-8. The change in nonproject represents a progressive diminution of the long-term debt obligation based on advances to the Colorado River dam fund as provided by Public Law 841, 80th Cong. The decrease in the power allocation is a reflection of reduced estimated obligations and the increase in nonproject costs.

JUSTIFICATION

Description.—This is a multipurpose project to regulate the flow of the Colorado River for control of floods, for irrigation and municipal water supplies, for improvement of navigation, and for generation of electrical energy. The Hoover powerplant is designed to have an installed nameplate capacity of 1,344,800 kilowatts. The Bureau of Reclamation operates and maintains the Hoover Dam and powerplant with appropriated funds from operating revenues. Certain powerplant machinery and other facilities are operated and maintained by the city of Los Angeles and the Southern California Edison Co. as agents for the United States.

Appropriation title.—Construction and Rehabilitation.

Work proposed, fiscal year 1961

Hoover powerplant, $2,307,309.—The program provides for continuation of progress payments for furnishing and installing generator, hydraulic turbine, butterfly valve, governor, generator voltage bus structure, and related equipment for unit N8.

Hoover switchyard, $541,180.—The program provides for progress payments for equipment for unit N8.

Permanent operating facilities (dam and reservoir), $7,221.—This amount is required for the purchase of minor items of equipment.

Adjustments, $1,290.—Represents adjustments due to revenues applied to construction costs.

Changes in total project obligations

	Obligation
1960 congressional justification	$168, 583, 260
1961 congressional justification	167, 341, 000
Decrease	1, 242, 260

The decrease is due to adjustment of the estimate to reflect actual bid prices for furnishing and installing generator, hydraulic turbine, butterfly valve, and governor for generating unit N8, $1,035,870; and decrease in estimated cost for painting generator, generator voltage bus structure, and other minor work associated with unit N8, $307,390. This decrease is partially offset by an increase of $101,000 due to structural changes in the switchyard.

HOOVER POWERPLANT

Chairman HAYDEN. The major portion of the request is for unit N–8 at the Hoover powerplant. When will this unit come on the line?

Mr. BENNETT. We should have that unit on the line in fiscal year 1962.

Chairman HAYDEN. It will supply the adequate amount of power?

Mr. BENNETT. Well, unit N–8 is a Nevada unit of 95,000 kilowatts, and with a good water supply it should be in full production during fiscal year 1962.

CENTRAL VALLEY PROJECT, CALIFORNIA

Chairman HAYDEN. The budget program includes $61,306,100 for the Central Valley project.

The justifications will be included in the record.

(The justifications follow:)

PF-45
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION In Central Valley Basin comprising the Sacramento and San Joaquin River Valleys in California, extending from Mount Shasta in the north to Tehachapi Mountains in the south.

AUTHORIZATION Emergency Relief Act, 1935 (49 Stat. 115) and subsequent acts. | B/C RATIO Trinity River Div. 2.38 Date 10-15-57

LAND CERTIFICATION By Secretary 4-5-56 (Trinity River Division) | DEFINITE PLAN REPORT For Trinity River Division submitted February 4, 1957.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 817,886,082	Appropriations to June 30, 19 59	$ 558,301,990
Net Property and Other Transfers	-4,338,314	Appropriations for F. Y. 19 60	40,373,554
Cash Advances--Non-Federal	94,240	Appropriations to Date	598,675,544
Adjustment 1/	-15,787,008	Initial Underfinancing F. Y. 1960	1,946,341
		Appropriations Required for F. Y. 1961	61,306,100
Total to be Allocated	$ 797,855,000	Balance to Complete after F.Y. 19 61	$ 155,958,097

ALLOCATIONS 3/

Irrigation	$ 394,083,000
Power	318,825,000
M. & I. Water	19,124,000
Flood & Nav.	48,535,000
Other 2/	17,288,000
Total	$ 797,855,000

REPAYMENT

Amount Repaid by Irrigators	$ 273,035,000
Amount Repaid by Power	430,574,000
Amount Repaid by M. & I. Water	28,714,000
Reimbursable Fish & W.L. allocation repaid from project revenues	2,568,000
Non-Reimbursable	62,964,000
Total	$ 797,855,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 321
Repayment of Investment per acre:	
By Irrigators	$ 222
By Power Revenues	91
By M.& I. Water Users	8

From $24 to over $100

Payment Capacity per Acre $ ____

Annual Charges:
O. & M. $ ____
Construction
Various from $1.50 to $4.50 per acre-foot.
Total $ ____

STATUS OF REPAYMENT CONTRACT: As of July 1, 1959, 52 water service contracts had been executed and 49 were under negotiation. A power wheeling contract was executed on August 27, 1951, and 26 power sales contracts are currently in force. Sixteen contracts for the construction of distribution systems have also been executed.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
			(SEE NEXT PAGE)				

Acreage Full Supply 282,955 Supplemental Supply 944,639 Total Acres 1,227,594 Power kw 1,013,800

Region	Date	Project and State
2	1-18-60	Central Valley Project, California

Footnotes appear on following page.

BR-118

Principal features

	Size or capacity	Completion	
		Percent Jan. 1, 1960	Date
Trinity River Division:			
Trinity Dam and facilities	2,500,000 acre feet	76	May 1962.
Whiskeytown Dam and facilities	250,000 acre-feet	6	December 1962
Lewiston Diversion Dam	14,600 acre-feet	24	October 1962.
Lewiston fish facilities		22	Do.
Clear Creek Tunnel	10.8 miles	64	June 1962.
Spring Creek Tunnel	2.9 miles	1	June 1963.
Irrigation development (Cow Creek)	9,850 acres	0	Do.
Trinity powerplant	100,000 kilowatts	1	Do.
Clear Creek powerplant	134,000 kilowatts	0	Do.
Spring Creek powerplant	150,000 kilowatts	0	August 1963.
Lewiston powerplant	300 kilowatts	0	June 1963.
Transmission facilities, south of Keswick	220 miles	0	May 1963.
Transmission facilities, Trinity Division powerplants to Keswick.	32 miles—230 kilovolts.	0	June 1963.
Permanent operating facilities		0	Do.
Temporary camp		98	November 1962.
Shasta Division	454,000 kilowatts	99	June 1960.
Sacramento River Division:			
Red Bluff Diversion Dam and Reservoir	75 feet x 740 feet	10	June 1964.
Corning Canal and facilities	21.1 miles	65	August 1963.
Corning Canal distribution systems	21,969 acres	0	May 1963.
Tehama-Colusa Canal and facilities	126 miles	3	After 1966.
Chico Canal and facilities	19 miles	2	Do.
Permanent operating facilities		0	Do.
American River Division	175,500 kilowatts	92	September 1962.
Project General:			
Water rights		94	June 1963.
Central Valley Waterfowl Conservation		38	June 1961.
Preference customer metering facilities		100	
Central Valley radio network		100	
Permanent operating facilities		100	
Delta Division:			
Distribution Systems		0	June 1963.
Completion of other facilities		97	Do.
Friant Division:			
Friant Dam and Reservoir	520,500 acre-feet	100	
Madera Canal, 1,000 cubic feet per second	36 miles	100	
Friant-Kern Canal, 5,000 cubic feet per second	153 miles	99	June 1964.
Madera distribution system	104,000 acres	62	March 1963.
Friant-Kern distribution system	214,820 acres	93	December 1961.
Permanent operating facilities		100	December 1959.
Temporary camp		100	June 1960.

[1] Decrease of $15,787,008 due to exclusion of $77,682,001 for distribution systems repaid by separate contracts, to the exclusion of $204,017 for the rewind of Shasta generator unit No. 4, to the exclusion of $67,000 for the Friant fish hatchery pipeline, to the inclusion of $62,166,010 for Folsom Dam constructed by the Corps of Engineers, and to other minor adjustments.

[2] Other includes nonreimbursable Fish and Wildlife, $14,179,000, nonreimbursable recreation $250,000, and reimbursable Fish and Wildlife $2,859,000.

[3] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$394,197,000	$394,083,000
Power	319,235,000	318,825,000
Municipal and irrigation water	19,142,000	19,124,000
Flood control	48,580,000	48,535,000
Other (fish and wildlife and recreation)	17,009,000	17,288,000
Total to be allocated	798,163,000	797,855,000

Total to be allocated has been reduced due to a lesser assignment of the cost of Folsom Dam, offset in part by the cost of additional miscellaneous irrigation studies and the additional Fish and Wildlife costs at Nimbus Hatchery and Tracy pumping plant. These changes have in turn reduced the allocation to irrigation, power, flood control, and municipal and irrigation water and increased the allocation to "Other."

Footnotes appear on following page.

Agricultural production, present and future

Over 200 different commercial crops, field, truck, cereal, seed, forage, and nursery crops, nuts, vines, deciduous and citrus fruits are now being raised and will continue to be produced in greater quantity in the future.

JUSTIFICATION

Description.—The project is located in central California and primarily consists of an integrated system of water storage and conveyance. Water supply made available by the project is used for full and supplemental irrigation, municipal and industrial consumption, and for the generation of hydroelectric power. Flood control, recreation, navigation, and fish and wildlife protection are also products of the project. The El Dorado Irrigation District operates and maintains the Sly Park features. All other completed features of the project are operated and maintained by the Bureau of Reclamation with appropriated funds.

Appropriation title.—Construction and rehabilitation.

WORK PROPOSED, FISCAL YEAR 1961

Trinity River division

Trinity Dam and facilities, $12,348,353.—This amount will virtually complete Trinity Dam and Reservoir. It is anticipated that all right-of-way purchases and construction of minimum basic recreational facilities will be completed. The dam embankment will also be completed and initial storage capacity available. Clearing of the reservoir area and relocation of roads will be nearing completion.

Whiskeytown Dam and facilities, $9,765,000.—Program will provide for continuation of construction of Highway 299 relocation and initiation of construction on Whiskeytown Dam. Reservoir clearing and road relocation will be started. Minimum basic recreational facilities will be underway.

Lewiston diversion dam, $1,002,110.—This amount will be used to initiate construction of Lewiston Dam. Reservoir clearing will also be started.

Lewiston fish facilities, $321,286.—The program provides for the initiation of construction of a fish hatchery and the continuation of the transportation of fish pending completion of the hatchery.

Clear Creek tunnel, $8,109,000.—This amount will be used to continue construction of the Clear Creek tunnel. Contracts will be awarded for purchase of the powerplant penstock and valves and for the construction of the powerplant tailrace.

Spring Creek tunnel, $7,153,500.—Construction will be continued on the Spring Creek tunnel and conduit. Contracts for the powerplant tailrace and the penstock and valves will be initiated.

Trinity powerplant, $4,087,500.—This program will be used to cover contractor's earnings on the powerplant and turbine and generator contracts.

Clear Creek powerplant, $4,790,000.—Contractor's earnings on the powerplant, turbines, and generators and associated activities will be provided with this program.

Spring Creek powerplant, $4,020,000.—These funds are required for contractor's earnings on the powerplant for payment on turbine and generator contracts and for initiation of construction of a small debris dam to protect the tailrace and improve fish conditions.

Lewiston powerplant, $16,000.—This amount is required for preconstruction work and award of contract for first stage construction in conjunction with construction of the diversion dam.

Transmission division facilities south of Keswick, $320,000.—With these funds studies for the lines south of Keswick will be continued for use in evaluating possible wheeling by the Pacific Gas & Electric Co.

Transmission division facilities, Trinity division powerplants to Keswick, $959,000.—The program provides for preparation of plans and specifications and award of contract late in the fiscal year for construction of Trinity-Clear Creek-Keswick and the Spring Creek-Keswick 230-kilovolt lines. Funds are also included for award of contract and earnings for construction of substations at Trinity, Clear Creek, and Spring Creek and additions to the substation at Keswick.

Temporary camp, $20,000.—This amount provides for miscellaneous work to be accomplished in the completion of Trinity River division community facilities.

Service facilities, depreciation and salvage, −$293,336.—The program includes $50,664 for the purchase of automotive and work equipment at the Trinity camps more than offset by −$344,000 of prior costs of service facilities to be distributed to the permanent property.

Sacramento River division

Corning Canal and facilities, $454,390.—This amount is required for payment of contractors' earnings on the Corning pumping plant and electrical equipment necessary to complete the plant, as well as for contracts for pumps and motors for the relift facilities to be awarded in conjunction with the distribution system contracts.

Corning Canal distribution systems, $1,143,000.—Following execution of repayment contracts, this amount is required for contractor's earnings on the Proberta Water District distribution system and the Corning Water District distribution system.

Tehama-Colusa Canal and facilities, $10,000.—To continue the collection of field data necessary for the canal.

Permanent operating facilities, $22,000.—This amount will be used for the construction of the operator's residence and water supply at the Corning Canal pumping plant.

Service facilities, depreciation and salvage, −$8,700.—This represents prior costs of service facilities to be distributed to the permanent properties.

American River division, $1,607,000.—The program will provide for the land and rights and contractor's earnings on the first stage of the distribution system for the El Dorado Irrigation District, as well as the procurement of land and rights and the award of the construction contract for the second stage of the system.

Project general

Water rights (Sacramento and San Joaquin Rivers), $180,000.—The investigation of water rights along the Sacramento River and its tributaries and along the San Joaquin River will be continued. Hydrographic data will be collected and analysis of water-right data will continue.

Central Valley waterfowl and conservation, $168,037.—This program continues the activity for waterfowl conservation under Public Law 674, 83d Congress (68 Stat. 879). The U.S. Fish and Wildlife Service and the California Department of Fish and Game will install pumps and construct levees and ditches at the Merced National Wildlife Area and at the Mendota Waterfowl Area.

Delta division

Distribution systems, $1,100,000.—This amount is required for field work, surveys, and initial work on plans and specifications for distribution systems for Clayton-Marsh Creek area of the Contra Costa County Water District, Maine Prairie Water District, and the Feather Water District. Construction will be initiated on the Feather Water District and the Maine Prairie Water District systems.

Completion of other facilities, $117,999.—The program provides for correcting the settlement of recording equipment, completion of cleanup and a minor amount of paving at the Delta fish protection facilities; and for the correction of freeboard by raising canal linings in certain sections of the Delta-Mendota canal.

Friant division

Friant-Kern canal, $69,113.—For furnishing and installing measuring devices for the Saucelito and Stone Corral Irrigation Districts.

Madera distribution system, $1,750,437.—This amount is required for contractors' earnings on units 1 and 2 of the Madera extensions following award of contracts.

Friant-Kern distribution systems, $1,995,559.—Provides for completion of land rights acquisition for unit 1 of the Southern San Joaquin Municipal Utility District system, contractor's earnings on the Stone Corral system, completion of land rights on the Shafter-Wasco system, and the virtual completion of the Tea Pot Dome system.

Service facilities, depreciation and salvage, −$5,000.—Represents amount of prior costs of service facilities to be distributed to permanent property.

Consolidated expenditures and credits, $83,852.—Represents transfers and credits in the amount of $41,852, miscellaneous investigations of future systems to be accomplished in the budget year which will subsequently be distributed to project features in the amount of $62,000 offset by a distribution of $20,000 in stores.

Changes in total obligations

	Obligations
1960 congressional justification	$803, 554, 817
1961 congressional justification	817, 980, 322
Increase	14, 425, 505

The increase in total obligations is due to the inclusion of additional Delta division distribution systems in the amount of $8,800,000 (Contra Costa County Water District, Maine Prairie Water District, and Feather Water District) and the inclusion of the Corning Canal distribution system in the amount of $4,765,000 (both items for the first time) and to minor increases, including $127,000 for additional water rights studies, $136,000 for additional turnouts on Corning and Delta-Mendota Canals, a $268,000 increase on the Delta fish screen and other final and minor cost changes of $329,505.

AVAILABILITY OF POWER

Chairman HAYDEN. Under your present construction schedule, when will power be available from the Trinity division of the project?

Mr. DOMINY. We anticipate that with normal water years—and of course as you recognize in our providing for the leadtime in phasing the construction of power projects that it would be unrealistic to estimate on other than average water conditions—and if we get average water conditions we would have stored water available to create energy after the spring runoff in 1963.

We are scheduling all of our powerplant and power installation facility construction with that schedule in mind, and I want to reassure the committee that Senator Engle's concern that we are requesting a little less money than was originally contemplated does not indicate that we are behind schedule or that we have changed our plan.

As a matter of fact, it is merely a recognition that the fabricating manufacturing plant can't earn the money any faster than what we have budgeted, and there is no point in asking for funds above the amount that could be earned within the fiscal year. We are awarding the contracts with due recognition to the leadtime required and we fully expect to have the powerplants in place and the units there ready to go when we have stored water available.

COW CREEK UNIT

Chairman HAYDEN. I will include in the record a letter from Senator Kuchel pertaining to funds for the initiation of construction of the Cow Creek unit of the Trinity division.

(The letter referred to follows:)

U.S. SENATE,
COMMITTEE ON APPROPRIATIONS,
April 21, 1960.

Senator CARL HAYDEN,
Chairman, Bureau of Reclamation Items,
U.S. Senate, Washington, D.C.

DEAR SENATOR: The California Flood Control Conference and the California Water Commission, as you have observed, annually perform a valuable service in weighing and screening requests for Federal assistance for and participation in a variety of projects for the conservation and utilization of our State's water resources. This year a similar duty has been assumed by the newly formed California Conference for Irrigation and Reclamation.

In connection with the 1961 budget requests for irrigation and reclamation projects, these State agencies have recommended a significant increase in the President's estimates, an additional item of $555,000 for the Cow Creek unit of the Trinity division of the Central Valley project.

I believe this is a justified and meritorious item and I am happy to concur with their recommendation, which I hope will receive thorough consideration by your subcommittee.

You will recall, I am sure, that this unit of the Trinity division was scrutinized by your subcommittee 2 years ago at the instance of my former colleague, Senator Knowland. The need for initiating construction of this feature of the Trinity division now is more urgent than before because of growing demands for water in this section of California.

The canal and pumping plant would provide a supply for an area east of the city of Redding, which has enjoyed considerable expansion in diversified crops

during the past few years. It is noteworthy that commodities produced there are in no manner contributory to the problem of farm surpluses and, except for some special crops such as strawberries, the products are largely locally consumed.

Construction of the canal would lead to a better balanced economy in Shasta County, presently relying very heavily upon industries.

The local people have indicated their readiness to sign a repayment contract and negotiations already are underway. An appropriation contingent upon consummation of contracts or other assurance of underwriting the local obligation would protect the Federal interest.

With warm personal regards, I am

Sincerely,

THOMAS H. KUCHEL, *U.S. Senator.*

PREPARED STATEMENT

Chairman HAYDEN. Please submit a statement for the record on this unit, and indicate how much would be required for the first year of construction.

Mr. DOMINY. We will be happy to do that, Mr. Chairman, and also touch on the repayment situation which would be a necessary corrolary to going ahead with construction.

(The material requested follows:)

CENTRAL VALLEY PROJECT

COW CREEK UNIT, TRINITY RIVER DIVISION

The Bureau is currently engaged in developing the definite plan report for the authorized Cow Creek irrigation development as part of the Trinity River division of the Central Valley project. The funds included in the fiscal year 1961 budget in the amount of $10,000 will be utilized to complete the definite plan report. Following the completion of the definite plan report it would be possible to immediately proceed with the engineering surveys and designs preparatory to the actual initiation of construction. It is estimated that approximately $150,000 would be needed for these essential preconstruction activities including negotiations of the appropriate repayment arrangements with entities authorized to execute repayment contracts in accordance with Federal reclamation law. It is not to be expected that the necessary repayment arrangements can be completed and the preconstruction work advanced to the point that actual construction could be undertaken in fiscal year 1961.

STATUS OF REPAYMENT CONTRACTS

Chairman HAYDEN. $1,143,000 is programed for the Corning Canal distribution systems.

What is the status of your repayment contracts for these facilities?

Mr. DOMINY. We have no problem as far as the water service repayment contracts are concerned. Unfortunately these districts when formed did not include all of the irrigable land that was originally contemplated for service. This is true both in the Proberta Irrigation District and the Corning Irrigation District, the two principal districts to be served from the Corning Canal. As a result when we plan the distribution system—and in these California areas they always want and should have closed pipe pressure distribution systems—and these are expensive to build when the lands to be served are gerrymandered about with nondistrict land interspersed with district land.

As a result when we submitted the proposal or when the district submitted the proposal to the California Securities Commission, that Commission raised the question as to whether this district could finance or should attempt to finance a distribution system of that expensive a character from the lands in the district.

Now we are not positive that this is a final answer on it. But we may be held up on going ahead on this item, and it appears now that it is unlikely that the contracts can be agreed upon and executed in time for construction to be undertaken in fiscal year 1961.

REASON FOR 10-YEAR DELAY

Now, I think this is a proper time to mention to the committee some of the things that concern us in this whole area. Senator Engle in his statement to the committee was quite critical of the 10-year delay in constructing the Tehama Colusa Canal, a principal feature of the Sacramento Canals unit. It is an area all of which is in private ownership. It is an area where some irrigation is already being practiced by private interests, either pumping from the river or from wells, and to build a long service canal down through that area in order to justify it will require the formation of districts that would pretty well be unified and all of the lands would have to be pretty well included, and our experience to date on the Corning Canal is that we just haven't been able to get that kind of united support for project type irrigation as contrasted to the individual who can drill a well or pump from a stream. I recognize that the reclamation law does not require repayment contracts in advance of construction, but it does require repayment contracts before we can deliver water, and I feel that we must continue to approach the construction of Tehama Colusa Canal of the Sacramento unit with reluctance until there is positive assurance that the costs would be paid back and that repayment commensurate with the Central Valley project requirement could be assured.

Now he also mentioned the fact that we had been insisting that the State actually put up money in the case of New Hogan and Black Butte and he also referred to the fact that the State now has indicated their willingness to put up some funds to assure repayment too on the Tehama Colusa Canal. The only reason, Mr. Chairman, that we insisted that the money be available is because the agency with whom we were dealing in the State did not have by State law the authority to assure the payments, and of course one legislature cannot bind another one in making appropriations.

Chairman HAYDEN. It is a legal proposition.

Mr. DOMINY. It is a legal proposition. We have no reluctance except that we have to comply with certain requirements of reclamation law.

Chairman HAYDEN. Well, the Senator was firmly of the opinion that the law was his way.

Mr. DOMINY. But California law fails to grant to the State agency we would be dealing with the authority to be sued by us in case of failure to meet the payments, and if the State wants to avoid putting up the actual cash they need to expand the authority to their contracting agency by the few magic words that we would need.

Chairman HAYDEN. Do you have any further comments on Central Valley?

RIGHTS-OF-WAY FOR VENTURA PROJECT

Mr. DOMINY. Mr. Chairman, may I just before you leave Central Valley, advise you that we have encountered one problem in California that I would just like to make a brief statement about. There are no funds being requested for fiscal year 1961 for Ventura project in

California. We had not anticipated needing any. I learned just today that some of the court awards on right-of-way purchases are running considerably higher than we had anticipated and it is likely that I will need to request shifting of some 1960 funds to Ventura, and I may also need to request authority to shift some 1961 funds to the Ventura project in order to meet these unanticipated right-of-way purchase costs and we will be writing the committee about this, if it develops, and it looks now, likely it would.

Chairman HAYDEN. How are those land values determined?

Mr. DOMINY. Most of them on this project are court awards.

Chairman HAYDEN. There have been some representations made to the committee about the use of court commissioners in arriving at the value of lands taken by the Government. Some people think their decisions are too high.

Mr. DOMINY. Well, we of course appraise the land at a fair current market value and try to reach a negotiated settlement. In those cases where agreement cannot be reached, then of course we do condemn.

Chairman HAYDEN. Yes.

Mr. DOMINY. Then it is either before a condemnation jury or just a judge or a court without a jury using court appointed Commissioners.

COLLBRAN PROJECT, COLORADO

Chairman HAYDEN. The budget program includes $5,140,000 for the Collbran project.

The justification will be included in the record.

(The justification follows:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Colorado River Basin, West-central Colorado in Mesa County

AUTHORIZATION Act of July 3, 1952 | B/C RATIO 1.37 | Date Sept. 3, 1959

LAND CERTIFICATION By Secretary Sept. 4, 1952 and March 24, 1959 | DEFINITE PLAN REPORT Revised April 1956

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 15,685,000	Appropriations to June 30, 1959	$ 5,715,108
Net Property and Other Transfers	305,000	Appropriations for F. Y. 1960	4,295,730
Cash Advances--Non-Federal		Appropriations to Date	10,010,838
Adjustment	3/ 432,000	Initial Underfinancing F. Y. 1960	91,770
		Appropriations Required for F. Y. 1961	5,140,000
Total to be Allocated	$ 16,422,000	Balance to Complete after F.Y. 1961	$ 442,392

ALLOCATIONS 4/

Irrigation	$ 6,013,000
Power 3/	10,163,000
M. & I. Water	
Flood & Nav.	
Fish & Wildlife	100,000
Other 2/	146,000
Total	$16,422,000

REPAYMENT

Amount Repaid by Irrigators 1/	$ 1,070,000
Amount Repaid by Power 3/	15,106,000
Amount Repaid by M. & I. Water	
Non - Reimbursable	246,000
Total	$16,422,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 271	Payment Capacity per Acre	$ 1.90
Repayment of Investment per acre:		Annual Charges:	
By Irrigators	$ 48	O. & M.	$ 0.94
By Power Revenues	223	Construction	0.96
By M. & I. Water Users		Total	$ 1.90

STATUS OF REPAYMENT CONTRACT:
Contract No. 14-06-400-595 was executed with the Collbran Conservancy District May 27, 1957.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Vega Dam and Reservoir	33,800 AF	85	3-61	Bonham-Cottonwood Pipeline	11.0 mi.	18	8-61
Southside Canal, Sta. 14/71.46 to 1146/49	18.0 mi.	80	3-61	Upper Molina Powerplant and Switchyard	8,640 kw.	17	10-61
Southside Canal, Sta. 1146/49 to 1760/11	11.6 mi.	17	7-61	Lower Molina Powerplant and Switchyard	4,860 kw.	11	10-61
Bonham Dam and Reservoir	1,300 AF	5	8-61	Transmission Lines	22.5 mi.	7	8-61
Grand Mesa Reservoirs Rehab.	5,800 AF	72	8-61	Cameo Switching Station (DeBeque Substation)	69 kv.	2	8-61
Temporary Camp		93	12-60				

Acreage Full Supply 2,459 | Supplemental Supply 19,751 | Total Acres 22,210 | Power kw 13,500

Region	Date	Project and State
4	1-18-60	Collbran Project, Colorado

Footnotes appear on the following page.

BR-133

[1] Repayment period by irrigators is 50 years.
[2] Includes $104,000 nonreimbursable CRDF and $42,000 Forest Service contribution.
[3] Includes $432,000 reimbursable interest during construction allocated to power.
[4] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$4,682,000	$6,013,000
Power	10,443,000	10,163,000
Fish and wildlife	100,000	100,000
Other	137,000	146,000
Total to be allocated	15,362,000	16,422,000

Total to be allocated increases as a result of net increase in obligations partially offset by reduction in reimbursable interest during construction associated with savings in cost of power facilities. Increase in irrigation caused by increased obligations on specific irrigation facilities. Decrease in power allocation is from savings in cost of specific power facilities.

Agricultural production present and future

Ninety-five percent of the irrigated lands in the project area is devoted to the production of hay and small grains to be used as livestock feed. The remaining 5 percent produces vegetables and fruits, mostly for home consumption. It is not anticipated that development of the project will result in any major change in the agriculture.

JUSTIFICATION

Description.—The project is located in west-central Colorado. It will provide a full water supply for the irrigation of 2,459 acres of new land, and a supplemental supply for 19,751 acres of inadequately irrigated land, and a power generation of 13,500 kilowatts. The project will also benefit fish and wildlife, and recreation.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Vega Dam and Reservoir, $441,172.—The program provides for completion of all work related to Vega Dam and Reservoir.

Southside canal, station 14+71.46 to 1146+49, $498,975.—Provides for the completion of all work on this section of the Southside canal.

Southside canal, station 1146+49 to 1760+11, $415,000.—For continued construction of this section of the Southside canal.

Bonham Dam and Reservoir, $190,000.—This program provides for completion of designs and specifications and award of contracts for the Bonham Dam and East Fork feeder canal.

Grand Mesa Reservoirs rehabilitation, $29,853.—This amount provides for completion of designs and specifications, and award of contract.

Bonham-Cottonwood pipeline, $1,189,000.—Construction will continue on this feature of the project.

Upper Molina powerplant and switchyard, $1,148,000.—For continued construction on all features.

Lower Molina power plant and switchyard, $968,000.—For continued construction on all features.

Transmission lines, $212,000.—The program provides for award of contracts on the transmission lines early in fiscal year 1961, with construction to continue throughout the fiscal year.

Cameo switching station (DeBeque substation), $79,000.—This amount is for continued construction of this feature.

Temporary camp, $10,817.—Provides for the cost of minor equipment materials and maintenance of the temporary camp located in Collbran, Colo.

Service facilities, depreciation and salvage, −$41,817.—Represents minor equipment acquisitions of $4,100 more than offset by $45,917 of prior costs of service facilities which will be distributed to permanent property.

Change in total obligations

	Obligations
1960 congressional justification	$14,470,000
1961 congressional justification	15,685,000
Increase	1,215,000

Footnotes appear on the following page.

Increase is due to actual construction bids being higher than the estimate by $247,000 on Southside canal, first schedule, and by $202,000 for the Bonham-Cottonwood pipeline; increase of $387,000 in cost of Southside canal, schedule 2, due to changes in location and more recent design data; increase of $1,467,000 to reflect a more realistic estimate of engineering, project administrations and other associated costs; increase of $404,000 for addition to an operating power and telephone line, contract earnings and right-of-way on Vega Dam and Cottonwood access road; for a total increase of $2,707,000. This total increase is partially offset by a decrease of $1,327,000 due to the actual bid price on the upper and lower Molina powerplants and generators and other powerplant equipment; and a decrease of $165,000 for elimination of purchase of water rights not now considered necessary, reduced estimate of the Leon-Park feeder canal due to realinement, and other minor adjustments in the estimates; for reductions totaling $1,492,000, leaving a net increase in total estimated obligations of $1,215,000.

Minidoka Project North Side Pumping Division, Idaho

Chairman Hayden. If there are no questions or comments we will proceed with the next project.

The budget program includes $429,000 for the continuation of construction of the North Side Pumping Division of the Minidoka project in Idaho.

The justifications will be included in the record.

(The justification follows:)

PF-45 (7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Columbia River Basin, South Central Idaho, Minidoka and Jerome Counties, near Rupert, Idaho

AUTHORIZATION Act of September 30, 1950 | B/C RATIO 4.77 | Date Dec. 1959

LAND CERTIFICATION 1/ By Secretary 8-18-52, 8-8-56 and 11-10-59 | DEFINITE PLAN REPORT Approved by Commissioner 8-29-55

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 11,395,000	Appropriations to June 30, 1959	$ 9,758,209
Net Property and Other Transfers	859,689	Appropriations for F. Y. 1960	797,550
Cash Advances--Non-Federal		Appropriations to Date	10,555,759
Adjustment	2/ 826,466	Initial Underfinancing F. Y. 1959	
		Appropriations Required for F. Y. 1961	429,000
Total to be Allocated	$ 13,081,155	Balance to Complete after F.Y. 1961	$ 410,211

ALLOCATIONS 5/		REPAYMENT		AMOUNTS PER ACRE			
Irrigation	$ 13,081,155	Amount Repaid by Irrigators	$ 12,650,579	Irrig. Invest. per Acre $ 166		Payment Capacity per Acre	3/ $ 15.00
Power		Amount Repaid by Power		Repayment of Investment per acre:		Annual Charges:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 161	O. & M.	$ 10.68
Flood & Nav.		Credits	4/ 430,576	By Power Revenues		Construction	3.22
		Non-Reimbursable		By M. & I. Water Users			
Total	$ 13,081,155	Total	$ 13,081,155	Credits	5	Total	$ 13.90

STATUS OF REPAYMENT CONTRACT: Division is in Public Lands. Formation of Irrigation District is scheduled to be accomplished by July, 1960. Proposed repayment contract, calling for all costs to be recovered in 50 years, to be executed by November, 1961.

PRINCIPAL FEATURES

Unit A:	Size or Cap.	Completion % 1-1-60	Completion Date	Unit B: (Continued)	Size or Cap.	Completion % 1-1-60	Completion Date
Main Pumping Plant	240 cfs	100	3-59				
Main Canal	240 cfs	100	6-58	Laterals	64,754 acres	91	6-62
Laterals	13,842 acres	98	6-60	Drains	373 Mi.	87	6-63
Drains		97	6-61	Pumping Substations		75	6-63
Pumping Substations		89	6-60	Permanent Operating Facilities		78	6-62
Unit B:							
Deep Wells	182 wells	85	6-63				

Acreage Full Supply 78,596 | Supplemental Supply None | Total Acres 78,596 | Power kw —

Region	Date	Project and State
1	1-18-60	Minidoka Project, North Side Pumping Division, Idaho

BR-138

[1] The Secretary has made the following land certifications: Aug. 18, 1952 for 69,500 acres; Aug. 8, 1956 for 11,250 acres; and Nov. 10, 1959 for 625 acres for a total of 81,375 acres. The revised project plan is for the development of 78,596 acres, all of which are covered by certification.

[2] Includes assigned costs of $71,000 from American Falls Reservoir and $698,000 from Palisades Reservoir. Also includes $57,466 of deferred O. & M. costs to be repaid as a construction obligation.

[3] Unadjusted payment capacity as derived in the February 1955 definite-plan report.

[4] Includes $352,535 for Jackson Lake sale of storage and water rental, $52,365 for rental of American Falls space for power, and $25,676 for rental of grazing lands.

[5] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$13,079,569	$13,081,155
Total to be allocated	13,079,569	13,081,155

Total to be allocated and irrigation allocation have increased as a consequence of the addition of requirement for supplemental construction on the existing wells to stabilize their capacity, largely offset by an increase in the estimated cost credits from the salvage of equipment.

Agricultural production present and future

The crops of this project consist of cereals, forage, miscellaneous field crops, vegetables, seed, and gardens. It is anticipated that there will be very little change in the crop pattern in the future.

JUSTIFICATION

Description.—This division of the Minidoka project will deliver a full water supply to 78,596 acres of semiarid land lying in south central Idaho.

Appropriation title.—"Construction and Rehabilitation."

WORK PROPOSED, FISCAL YEAR 1961

Unit A

Drains, $1,500.—Program provides for completion of seeding of drain banks.

Unit B

Deep wells, $360,808.—The program provides for completion of 12 wells and will continue the program of modification of existing wells to stabilize and increase their production capacity.

Laterals, $82,812.—The lateral program provides for the completion of the lateral system for 12 wells and for continuing the ditch bank seeding program.

Drains, $42,685.—These funds will provide for continuing the drainage work as required by field developments and continuing the drain bank seeding program.

Pumping substations, $188,340.—Pumping substations will be provided for the 12 new wells mentioned under the deep well program above. The programs to equip substations with power factor improvement equipment and modify existing substations will continue.

Permanent operating facilities, $20,488.—This amount will provide for the purchase of permanent project operating equipment and minor work on permanent facilities previously constructed.

Service facilities, depreciation, and salvage, −$20,000.—Represents prior costs of work equipment and other temporary service facilities charged to the permanent properties.

Consolidated expenditures and credits, −$31,833.—Represents $17,833 of stores items that will be used on the project features during the year and the distribution of $14,000 in deferred costs which were incurred in prior years.

Undelivered orders, −$215,800.—Represents liquidation of prior year obligations.

Change in total obligations

	Obligations
1960 congressional justification	$11,395,000
1961 congressional justification	11,395,000
No change	----------

Chairman HAYDEN. If there are no questions or comments we will proceed with the next project.

WASHOE PROJECT, CALIFORNIA AND NEVADA

The budget program includes $3,137,000 for the continuation of construction of the Prosser Creek Dam and Reservoir of the Washoe project.

The justification will be included in the record.

(The justification follows:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION In the Truckee River and Carson River basins in western Nevada and eastern California, in the vicinity of Reno, Nevada.

AUTHORIZATION P. L. 858, 84th Congress, 2nd Session and P.L. 85-706, 85th Congress, 2nd Session

B/C RATIO Prosser Creek 1.5 Washoe 1.7 Date 4-1-59

LAND CERTIFICATION Scheduled for January 1961

DEFINITE PLAN REPORT Scheduled for submission September 1961.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 50,547,000	Appropriations to June 30, 1959	$ 800,000
Net Property and Other Transfers	1,698,000	Appropriations for F. Y. 1960	678,750
Cash Advances--Non-Federal		Appropriations to Date	1,478,750
Adjustment	1/ -46,287,000	Initial Underfinancing F. Y. 1960	-
		Appropriations Required for F. Y. 1961	3,137,000
Total to be Allocated	$ 5,958,000	Balance to Complete after F.Y. 1961	$ 45,931,250

ALLOCATIONS 2/

Irrigation	$
Power	
M. & I. Water	
Flood & Nav.	4,493,000
Fish & WL	1,407,000
Recreation	58,000
Total 1/	$5,958,000

REPAYMENT

Amount Repaid by Irrigators	$
Amount Repaid by Power	
Amount Repaid by M. & I. Water	
Non - Reimbursable 1/	5,958,000
Total	$ 5,958,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ -
Repayment of Investment per acre:	
By Irrigators	$ -
By Power Revenues	-
By M.& I. Water Users	-

Payment Capacity per Acre	$ -
Annual Charges:	
O. & M.	$ -
Construction	-
Total	$ -

STATUS OF REPAYMENT CONTRACT: All construction costs for Prosser Creek development are nonreimbursable; therefore, no repayment contract is required. 1/

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Stampede Dam and Reservoir	126,000 A.F.	0	6-68	Prosser Creek Dam & Res.	30,000 A.F.	8	6-63
Calvada Power Unit	26,500 K.W.	0	10-68	Truckee Meadows Drains	4,880 Ac.	0	6-65
Washoe Fish Hatchery	—	0	6-68	Permanent Operating Facilities		0	6-67
Watasheamu Dam & Reservoir	115,000 A.F.	0	6-65	Temporary Camps		23	7-64
Carson Valley Irrigation and Drainage System	—	0	6-68				
Watasheamu Power Unit	8,000 K.W.	0	6-66				

Acreage Full Supply 8,790 Supplemental Supply 43,680 Total Acres 52,470 Power kw 34,500

Region	Date	Project and State
2	1-18-60	Washoe Project, Nevada-California

Footnotes appear on the following page.

BR-144

[1] Allocations and repayment cover Prosser Creek Dam and Reservoir only. Studies are not far enough advanced to furnish similar detail on the remainder of the project.
[2] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Flood control	$3,050,000	$4,493,000
Fish and wildlife	1,300,000	1,407,000
Recreation		58,000
Total to be allocated	4,350,000	5,958,000

The change in total to be allocated is due to an increase in estimated obligations for Prosser Creek Dam and Reservoir. Changes in flood control and fish and wildlife reflect a proportionate share of the increase in estimate. Recreation represents an assignment of the cost of minimum basic facilities.

Agricultural production, present and future

Hay, grain and pasture, dairy and beef cattle and general livestock.

JUSTIFICATION

Description.—This multipurpose project, located in the vicinity of Reno, Nev., will furnish supplemental water supply to 43,680 acres, and a full water supply to 8,790 acres. In addition, the project will have a power-generating capacity of 34,500 kilowatts and will provide benefits to flood control, fish and wildlife, and recreation. The construction program for fiscal year 1961 includes Prosser Creek Dam and Reservoir only.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Prosser Creek Dam and Reservoir, $3,090,000.—This amount will provide for contractors earnings on the construction contract, for payments to the State of California for highway No. 89 relocation, and for earnings on associated minor construction and supply contracts.

Service facilities, depreciation, and salvage, $29,000.—For the construction of a temporary laboratory and warehouse and the purchase of automative, laboratory, and other work equipment all totaling $56,000, offset in part by the distribution of $27,000 of prior costs of service and camp facilities to the permanent properties.

Consolidated expenditures and credits, $18,000.—This represents engineering and other costs to be distributed to project features in subsequent years partially offset by nonappropriation property transfers and charges from Solicitors' Office financed from appropriation to that office.

Change in total obligations

	Obligations
1960 congressional justification	$50,547,000
1961 congressional justification	50,547,000

Although no change has been made in the total estimated obligations for the project, the estimate for Prosser Creek Dam has increased by $1,608,000, due to increase in outlet cpacity to provide better flood-control operation, increase in spillway design flood resulting in increased height of dam, relocation of the spillway to secure better foundation conditions, and addition to minimum basic recreation facilities. Obligations estimated for the total project will be reviewed and revised as necessary when detailed information is made available by completion of the definite plan report.

PROSSER CREEK DAM AND RESERVOIR PROJECT

Chairman HAYDEN. Any questions or comments on this project? Is the work proceeding regularly?

Mr. DOMINY. Yes; but I would like to call the committee's attention to the fact that the estimate carried here of $5,958,000 for the Prosser Creek Dam and Reservoir represents an increase of $1,608,000 as reported to you in our fiscal year 1960 budget. The increase in the estimate is based on more extensive foundation and materials exploration, additional hydraulic studies, and other field investigations which have been carried on during the past year.

As a result of these detailed studies, it has been necessary to shift the spillway to the right abutment of the dam because of unfavorable

geologic conditions that were found in the left abutment and to increase the surcharge capacity of the reservoir to safely pass the designed flood. Also the outlet works capacity was increased to permit evaluation of reservoir for flood storage space.

To accommodate these and other considerations the length of the dam has been increased by 50 feet and the height by 2½ feet. Also this increased cost reflects more accurate estimates for the relocation of the highways and utilities around the damsite and reservoir and the addition of minimum basic recreation facilities as a project cost.

INCREASE OVER ORIGINAL ESTIMATE

Senator ELLENDER. How much more is that than your original estimate?

Mr. DOMINY. Well, it is up $1,608,000 from the estimate we furnished to the committee in fiscal year 1960.

Senator ELLENDER. Over what period of time, this year?

Mr. DOMINY. That was just 1 year, because we accomplished this detailed work and we got for the first time the final report from the Army on the design flood.

Senator ELLENDER. Why could not that have been done before you put in your first estimate of costs?

Mr. DOMINY. That is always the question we are faced with as to how detailed should be our investigating before we actually start our so-called advance planning.

Normally we come to Congress for authorization on a feasibility grade level of investigation, and frequently that estimate stands up.

On the other hand, as is true here, when we get into advance and detailed exploration, we do occasionally run into conditions which make necessary additional expenditures.

Senator ELLENDER. But in most cases though, is it not true that the estimated costs are upped?

Mr. DOMINY. Yes; I think that is generally true, particularly in recent years when our trend line of all costs of this nature has been running about 5 percent a year increase.

Senator ELLENDER. In this particular case, how has your benefit-to-cost ratio been affected?

Mr. DOMINY. Mr. Bennett, do you have that as compared to the last year?

Mr. BENNETT. I don't have it for last year.

Senator ELLENDER. If you do not have it available I wonder if you will put it in the record?

Mr. DOMINY. The Prosser Creek still with these new costs has a benefit-to-cost ratio of 1.5 to 1; and it was 1.7 to 1 before we raised the costs.

Senator ELLENDER. Do you think the present estimates will be firm throughout the construction of this project?

Mr. DOMINY. We have awarded the contract for the major part of the dam and these costs do reflect the bids that we got on that feature, so I think, that these costs will stand up now that we are giving you.

COMPETITION IN BIDDING

Senator ELLENDER. How have your bids been compared to the past, not on this particular project, but has there been a tendency to obtain more favorable bids than this in the past?

Mr. DOMINY. Yes, I would say over the past 6 months that we have had more active competition in bidding, and with generally the low bidder being below the engineers' estimate more often than we have had in any period for 8 or 10 years.

Senator ELLENDER. But in this particular case where you have awarded the bid, how much lower were the bids than your estimates?

Mr. DOMINY. Well, we will have to supply that for the record.

(The information referred to follows:)

WASHOE PROJECT

PROSSER CREEK DAM AND RESERVOIR

The engineer's estimate for specifications No. DC–5197 covering the construction of Prosser Creek Dam was $2,913,559. The low bid of the successful bidder was $2,181,323.50.

MCMILLAN DELTA PROJECT, NEW MEXICO

Chairman HAYDEN. The next project is the McMillan Delta project in New Mexico which has a budget program of $100,000. I will put the justification in the record.

(The justification follows:)

PF - 65
(7 - 58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Rio Grande and Gulf Basin. In the Pecos River Basin in Southeastern New Mexico, Eddy County.

AUTHORIZATION Act of February 20, 1958 (72 Stat. 17). | **B/C RATIO** 7.2 1/ | Date Sept. 1958

LAND CERTIFICATION ------ | **DEFINITE PLAN REPORT** Report on engineering plan of Channelization Division scheduled for submittal to Comm. April 1960.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 2,331,716	Appropriations to June 30, 19 59	$ 233,000
Net Property and Other Transfers	529,284	Appropriations for F. Y. 19 60	29,250
Cash Advances--Non-Federal		Appropriations to Date	262,250
Adjustment		Initial Underfinancing F. Y. 1960	99,250
		Appropriations Required for F. Y. 1961	100,000
Total to be Allocated	$ 2,861,000	Balance to Complete after F.Y. 1961	$ 1,870,216

ALLOCATIONS 4/

Irrigation	$ 2,600,000
Power	
M. & I. Water	
Flood & Nav.	
Salinity	
Alleviation	261,000
Total	$ 2,861,000

REPAYMENT

Amount Repaid by Irrigators	$
Amount Repaid by Power	
Amount Repaid by M. & I. Water	
Contributions in kind	380,000
Other 2/	2,220,000
Non - Reimbursable	261,000
Total	$ 2,861,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$
Repayment of Investment per acre:	
By Irrigators	$
By Power Revenues	
By M.& I. Water Users	
Payment Capacity per Acre 3/	$
Annual Charges:	
O. & M.	$
Construction	
Total	$

STATUS OF REPAYMENT CONTRACT: Repayment contracts for Channelization Division scheduled for execution prior to initiation of construction in F. Y. 1962.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion %	Completion Date
Malaga Bend Division:							
Salinity Alleviation Works		15	6-60				
Channelization Division:							
McMillan Delta Water Salvage Channel, 1,500 cfs.	16 MI.	10	6-63				
Permanent Operating Facilities		--	3-63				

Acreage Full Supply _____ Supplemental Supply _____ Total Acres _____ Power kw _____

Region	Date	Project and State
5	1-18-60	McMILLAN DELTA PROJECT, NEW MEXICO

BR-149

Footnotes appear on the following page.

[1] 50-year benefit-cost ratio. Excludes salinity alleviation, as annual benefits for such measures were not evaluated.
[2] Such portion of this will be repaid as is within the water users' ability to repay as determined by the Secretary from time to time in accordance with the act of Feb. 20, 1958 (72 Stat. 17).
[3] Repayment arrangements not yet determined.
[4] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$2,600,000	$2,600,000
Salinity alleviation	150,000	261,000
Total to be allocated	2,750,000	2,861,000

Total to be allocated and costs allocated to salinity alleviation are both increased as a result of increase in estimated obligations to be incurred in the construction of the Malaga Bend division of the project. Detailed investigations have disclosed that a longer discharge line will be required for brine disposal than had been previously contemplated. The original disposal area was found to be unsuited without treatment to prevent return of the brine to the aquifer by percolation.

JUSTIFICATION

Description.—The project which is in southeastern New Mexico in Eddy County, provides for the salvage of an average of about 24,490 acre-feet of Pecos River water annually. The project also provides for salinity alleviation in the Malaga Bend area.

Appropriation title.—Construction and rehabilitation.

WORK PROPOSED, FISCAL YEAR 1961

Channelization division

McMillan Delta Water Salvage Channel, $100,375.—The program provides for the collection of design data, preparation of designs, and preparation and issuance of construction specifications.

Service facilities, depreciation, and salvage, −$375.—Represents cost of service facilities procured in the prior year which will be distributed to permanent property in the budget year.

Change in total obligations

	Obligations
1960 congressional justification	$2,217,173
1961 congressional justification	2,331,716
Increase	114,543

The increase is due to a change in plan of the salinity alleviation works in the Malaga Bend division to include a longer pipeline in order to reach a suitable brine disposal area.

SALINITY ALLEVIATION

Chairman HAYDEN. Are these funds for construction or for the continuation of preconstruction activities?

Mr. DOMINY. Well, these funds are for the actual construction of the salinity alleviation portion of the McMillan Delta project.

Chairman HAYDEN. What is the status of the repayment contract for the channelization work?

Mr. DOMINY. Before we leave that salinity alleviation, I want to call the committee's attention to some problems that we have encountered there. We had first expected to dispose of these saline waters in a lake to be used as sort of an evaporating sump.

But we discovered that this lake wasn't tight enough for our purposes, and that the saline water was going to seep away and still get back into the river and possibly damage some other lands. We next considered running a pipeline over to another depression, but that appeared to be quite costly. Our present approach to it, which we think is going to be fully acceptable, is to dispose of it in wells, in ground water wells where we would drill a deep well and dispose of

this brine in the ground. Our tests to date indicate this will be satisfactory and will be the cheapest way to solve that salinity problem.

Chairman HAYDEN. The well would be in the vicinity of where the seep now exists?

Mr. DOMINY. Yes.

Chairman HAYDEN. Isn't it a strange thing that they would find so much salt in water coming out at one place there?

Mr. DOMINY. Yes, sir.

Senator ELLENDER. We have had that experience before and we are spending quite a lot of money trying to cope with that problem.

UNDERGROUND STORAGE

Chairman HAYDEN. There is a place down below where there is room enough to store this water underground?

Mr. DOMINY. Yes; we feel that this is going to be completely successful.

You are quite correct that the money we are asking for in fiscal year 1961 is on the McMillan Delta portion of the project but I wanted you to be aware we have run into this problem with the fiscal year 1960 money available now. The money in the budget for 1961 is to start the McMillan Delta portion of this multiple-purpose project.

Senator ELLENDER. How much had you spent on the lake project?

Mr. DOMINY. We are estimating total nonreimbursable appropriation requirement of $261,000 for this salinity alleviation.

Senator ELLENDER. Yes, but what I mean is, had you spent any money at all in trying to put the water in the lake?

Mr. DOMINY. Yes.

Senator ELLENDER. How much?

Mr. DOMINY. We had spent to June 30, 1959, only $26,536, and then we have a program for 1960 of $234,464. I am not sure just how much of that has been expended for this fiscal year.

Senator ELLENDER. How far removed from the site of the project will these wells be?

Mr. DOMINY. They would be right close to the source of these saline springs, and the well is going to be about 4,000 feet deep.

Senator ELLENDER. What evidence have you that it may not drift back?

Mr. DOMINY. Well, 4,000 feet deep down into the character of underground strata that exists in that area convinces us that it will not come back to the surface and will not in any way be detrimental to the surrounding area.

Senator ELLENDER. You have evidently dug down there to find the cavern. Is that correct?

Mr. DOMINY. We have done some checks on gas-well logs and other drilling in that general vicinity to know what the character is. We haven't had to actually put the well down ourselves because we were able to obtain geology from other structures that have been drilled.

Senator ELLENDER. How much more will this project cost than first contemplated?

Mr. DOMINY. So far as that salinity alleviation, we still think we will be able to do that within the original costs by using this well.

Do you have a report on that repayment situation, Mr. Palmer?

Mr. PALMER. There has been a difference of opinion between Carlsbad and the other irrigation districts to be benefited and the Bureau as to the type of works that should be built and repayment arrangements therefor. We are now in basic agreement as to the types of work that would be done under the McMillan Delta proposal, and we have evidence that they are willing now to enter into repayment contract negotiations. In that connection those contracts are required by the terms of the act prior to the initiation of the work.

MIDDLE RIO GRANDE PROJECT, NEW MEXICO

Chairman HAYDEN. If there are no further questions, we will take up middle Rio Grande project, with a budget program of $1,729,000 for the continuation of the project. I will include the justification in the record.

(The justification follows:)

PF: 46
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Rio Grande and Gulf Basin, Middle Rio Grande Valley in north-central New Mexico, extending from the Colorado-New Mexico Boundary south to the backwaters of Elephant Butte Reservoir and including rectification of the Rio Grande in the vicinity of Truth or Consequences (formerly Hot Springs), New Mexico.

AUTHORIZATION Flood Control Act of 1948 (62 Stat. 1171, 1179) | B/C RATIO 2.39 | Date Dec. 1958

LAND CERTIFICATION by Secretary October 7, 1953 | DEFINITE PLAN REPORT "Initial Channelization" & General Plan & Drainage approved by Comm. 10-3-52 & 10-9-53, respectively.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 30,731,730	Appropriations to June 30, 1959	$ 26,661,186
Net Property and Other Transfers	738,270	Appropriations for F. Y. 1960	1,316,250
Cash Advances--Non-Federal	30,000	Appropriations to Date	27,977,436
Adjustment		Initial Underfinancing F. Y. 1960	178,750
		Appropriations Required for F. Y. 1961	1,729,000
Total to be Allocated	$ 31,500,000	Balance to Complete after F.Y. 1961	$ 846,544

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE 2/	
Irrigation	$ 15,740,000	Amount Repaid by Irrigators	$ 3,935,000	Irrig. Invest. per Acre	$ 225
Power		Amount Repaid by Power		Repayment of Investment per acre:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 56
Flood & Nav.	13,650,000	Class B Lands	11,805,000	By Power Revenues	
Other 1/	2,110,000			By M & I Water Users	
		Non - Reimbursable	15,760,000	Class B Lands	169
Total	$ 31,500,000	Total	$ 31,500,000		

Payment Capacity per Acre	$ 12.27
Annual Charges:	
O. & M.	$ 3.04
Construction	1.40
Total	$ 4.44

STATUS OF REPAYMENT CONTRACT: Executed with Middle Rio Grande Conservancy District on September 24, 1951.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion %	Completion Date
El Vado Dam	194,500 AF	99	6-61				
Diversion Works	4 each	96	3-60				
Deep Wells	5 each	100	6-57				
Canals	150 Mi.	91	2-60				
Laterals and Drains	986 Mi.	86	6-62				
Channelization	208 Mi.	80	6-62				
Permanent Operating Facilities		90	6-60				

Acreage Full Supply 121,680 3/ Supplemental Supply ____ Total Acres 121,680 3/ Power kw ____

Region	Date	Project and State
5	1-18-60	Middle Rio Grande Project, New Mexico

BR-153

1 Indian land and basic water data allocation.
2 For 69,930 acres of class A (irrigable) non-Indian lands only.
3 Total water right land (81,611 certified as irrigable and 40,069 classed as 6W land). Of the irrigable total 69,930 are non-Indian and 11,681 are Indian.

Agricultural production, present and future

Present crops grown in the area consist principally of forage, cereal, vegetables (including home gardens), cotton, and fruits. No change is expected in the future.

JUSTIFICATION

Description.—This project is located in the middle Rio Grande Valley in north-central New Mexico. The purpose of this project is to provide rehabilitation of irrigation works, sediment control and flood control. Sedimentation and flooding will be controlled by construction of reservoir and levee improvements by the Corps of Engineers and channelization works by the Bureau of Reclamation.

Flood control works completed are operated and maintained by the Bureau with appropriated funds. The irrigation facilities are operated and maintained by the Bureau with funds advanced by water users.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

El Vado Dam, $2,500.—The program provides for continuation of seepage studies to determine relationship between reservoir stage and seepage; collect water samples from reservoir and from seepage and analyze for suspended sediment and dissolved solids; and to observe any change that may affect stabilization of the dam.

Laterals and drains, $700,000.—Construction will be completed on three lateral units in the Belen area and two lateral units in the Albuquerque area. Construction will be started and completed on one lateral unit in the Albuquerque area. Collection of design data will be completed and construction started on one unit in Belen area.

Channelization, $1,815,800.—These funds are for channelization work on two units in the Belen area and on two units in the Albuquerque area. Preparation of designs and specifications will be performed for channelization in the Cochiti area and one unit in the Belen area. All of these units are part of the coordinated channelization and levee improvement program jointly developed with the Corps of Engineers. An amount of $781,300 is included in this program for work that will be performed by the Bureau of Reclamation and which will be financed by the corps. Of the total program $181,700 is for transfer to the corps for channelization on one of the units which is under their administration.

Service facilities, depreciation, and salvage, −$8,000.—Represents $8,500 cost of service facilities procured in prior years which will be distributed to permanent property in fiscal year 1961 which is partially offset by $500 for miscellaneous tems of equipment to be purchased.

Coordinated channelization financed by Corps of Engineers, −$781,300.—Represents costs of Bureau-administered levee improvement contracts for the Corps of Engineers financed by the corps.

Changes in total obligations	*Obligations*
1960 congressional justification	$30, 761, 730
1961 congressional justification	30, 761, 730
No change	----------

CONTINUATION OF PROJECT

Chairman HAYDEN. I note in the justifications that only $800,000 will be required for this project after fiscal year 1961. Does this mean you are completing the project?

Mr. DOMINY. Well, we show continuation of channelization after 1961 of $1,189,700 and of laterals and drains only $129,196. We will substantially complete that portion of the Middle Rio Grande project that deals with the rehabilitation and realinement and drainage of the old established irrigation project features.

And we will have a continuing channelization program which is nonreimbursable portion of this project over into 1962.

Chairman HAYDEN. That is where you had the saltcedar problem?

Mr. DOMINY. Yes; and where the river meandered out over acres and acres of these saltcedar flats and where we actually have cut new channels and attempted to maintain the river in a confined channel where we won't have all that loss of water.

We have also, in cooperation with the Corps of Engineers, changed the alinement of the river between the levees in a good many places.

Where the river had meandered and was cutting into the levee, we have done some work there with some cables and jacks which has been very inexpensive and has worked extremely well. Just by stringing a

line of cables and steel jacks which can be done very inexpensively, then the silt begins to deposit behind them, between the jack and the dyke, and in just a short while you have the river channeled down through the middle without tearing up your dyke and without even needing to raise it.

Chairman HAYDEN. I understand cleaning out that channel made it possible for the first time for New Mexico to comply with the compact with Texas for the delivery of water.

Mr. DOMINY. It certainly has helped. The channelization work constructed to date has salvaged water for beneficial uses in an estimated amount of more than 350,000 acre-feet in the 9 years since the first construction was underway.

We now are realizing on the average about 45,000 to 50,000 acre-feet a year of water that would not get down into Elephant Butte and be available for irrigation storage if it wasn't for this work.

I suspect that it is even more than that, but this is as near as we can measure the benefits of the project.

OTHER COSTS

Senator ELLENDER. In answer to a question by Senator Hayden, did I understand you to say that to complete the project costs would be in excess of the $846,000 balance that appears on page 153 of the justification? In other words, you say that something would have to be done after 1961. What is that and at whose expense?

Mr. DOMINY. My figures show we will need $129,196 to complete the laterals and drains of that after 1961.

Senator ELLENDER. Where would that money come from? Would that be within the $846,000?

Mr. DOMINY. It would be appropriated but reimbursable by the water users under valid contract. Then I also show $1,189,700 but Mr. Golze advised me that part of that is work that the corps is doing.

Senator ELLENDER. I was under the impression that the money paid back by the irrigators went back to the Treasury. Is that right?

Mr. DOMINY. That is right.

Senator ELLENDER. I thought these repayments were used to offset the initial costs of this program.

Mr. DOMINY. That is right, sir.

Senator ELLENDER. Do I understand you to say you are now going to use some of these repayments to dig laterals.

PRINCIPAL TYPES OF WORK

Mr. DOMINY. The middle Rio Grande project authorization consisted of two principal types of work.

One was the channelization work in the river which is nonreimbursable as flood control and water salvage.

Senator ELLENDER. And that should have been included in your Federal costs here of $30,731,730?

Mr. DOMINY. That is correct, sir.

Then the other item that is included within that same total Federal obligation is the approximately $8,405,905 which we are spending overall, and most of which has already been expended on the laterals and drains.

Now that portion of it is reimbursable.

Senator ELLENDER. I know, but that is for their use and is in addition to the work that you would ordinarily do. It is for their benefit. Why should the Government pay that?

Mr. DOMINY. Well, we advance the money just as we do on all of our reclamation projects. But that portion will be repaid, Senator.

Senator ELLENDER. Will that repayment be in addition to the $3,935,000 that they are to repay as a percentage of it or in the justification?

Mr. DOMINY. It amounts to $3,935,000. That is correct; to be repaid by the irrigators.

Senator ELLENDER. That is to go toward liquidating the total costs of this program; am I correct?

Mr. DOMINY. That is correct, sir.

Senator ELLENDER. Will any part of that be used to do work in addition to the $30,761,730 provided in this——

Mr. DOMINY. No, sir; it will not.

Senator ELLENDER. I just wanted to clear the record on that.

Very good.

WASHITA BASIN PROJECT, OKLAHOMA

Chairman HAYDEN. The budget program includes $6,960,000 for the continuation of construction of the Washita Basin project in Oklahoma.

The justifications will be included in the record.

(The justifications follow:)

PF-63
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Arkansas - White - Red Basin, Washita River Subbasin in Western Oklahoma from the vicinity of Clinton, Custer, County to the vicinity of Anadarko in Caddo County.

AUTHORIZATION Act of February 25, 1956 (70 Stat. 28) | B/C RATIO 1.8 | Date 12/15/59

LAND CERTIFICATION Scheduled for September 1961 and December 1961. | DEFINITE PLAN REPORT Vols. I & II provisionally approved 10/58 and 2/58. Vols. III & IV scheduled for submittal 6/61 and 12/61.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 38,756,500	Appropriations to June 30, 1959	$ 11,962,370
Net Property and Other Transfers	360,000	Appropriations for F. Y. 1960	9,289,304
Cash Advances--Non-Federal		Appropriations to Date	21,251,674
Adjustment	1/ 375,000	Initial Underfinancing F. Y. 1960	
		Appropriations Required for F. Y. 1961	6,960,000
Total to be Allocated	$ 39,491,500	Balance to Complete after F.Y. 1961	$ 10,511,826

ALLOCATIONS 6/

Irrigation	$ 10,169,700
Air Force	291,400
M. & I. Water	12,225,400
Flood & Nav.	15,417,000
Fish & Wildlife	839,000
Recreation	549,000
Total	$ 39,491,500

REPAYMENT

Amount Repaid by Irrigators 2/	$ 7,290,000
Amount Repaid by Power	
Amount Repaid by M. & I. Water 3/	15,105,100
Non - Reimbursable 4/	17,096,400
Total	$ 39,491,500

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 669
Repayment of Investment per acre:	
By Irrigators	$ 456
By Power Revenues	
By M. & I. Water Users	213
Payment Capacity per Acre	$ 5/
Annual Charges:	
O. & M.	$ 5/
Construction	5/
Total	$ 5/

STATUS OF REPAYMENT CONTRACT: Contracts executed with Fort Cobb Reservoir Master Conservancy District and Foss Reservoir Master Conservancy District covering repayments of amounts shown above, executed July 23, 1957 and February 14, 1958, respectively.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date
Fort Cobb Division			
Fort Cobb Dam & Reservoir	142,500 AF	90	6-60
Fort Cobb Div. Irrig. Fac.	6,000 Ac.	3	12-62
Fort Cobb Div. M&I Water Fac.	20.7 Mi.	33	9-60
Fort Cobb Farm. Oper. Fac.		9	12-62
Recr., Fish & Wildlife Fac.		21	9-60
Foss Division			
Foss Dam & Reservoir	430,070 AF	14	6-62
Foss Div. Irrig. Fac.	10,000 Ac.	2	6-64
Foss Div. M&I Water Fac.	67.2	1	6-62
Foss Farm. Oper. Fac.	0	0	6-64
Recr., Fish & Wildlife Fac.	0	0	6-64

Acreage Full Supply 16,000 | Supplemental Supply — | Total Acres 16,000 | Power kw —

Region	Date	Project and State
5	1-18-60	Washita Basin, Oklahoma

BR-162

1 Interest during construction on municipal and industrial investment.
2 55-year repayment period.
3 50-year repayment period.
4 Includes $291,400 nonreimbursable allocation of Foss Dam and Reservoir costs to Air Force for water reserved for Clinton-Sherman Air Force Base.
5 Repayment studies for irrigation not yet final.
6 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$10,994,500	$10,169,700
Air Force	389,500	291,400
Municipal and industrial water	12,547,500	12,225,400
Flood control	15,417,000	15,417,000
Fish and wildlife	839,000	839,000
Recreation	549,000	549,000
Total to be allocated	40,736,500	39,491,500

The change in irrigation, municipal and industrial water, and Air Force are a result of reduced total project obligations and in a change in water use from irrigation to municipal and industrial as a consequence of additional communities participating in the Foss division of the project. Allocations to flood control and fish and wildlife are determined by capitalizing benefits and the allocation to recreation is for specific costs of recreational facilities, and thus the allocations to these purposes do not fluctuate with changes in the total obligations.

Agricultural production, present and future

Crops presently grown are cotton, wheat, forage sorghum, and sudan pasture. Future crops will consist of less wheat and small grain and more alfalfa, corn, and grain sorghum.

JUSTIFICATION

Description.—The project is located in western Oklahoma. Its purpose is to utilize the waters of Cobb Creek and the Washita River for municipal and industrial purposes, for irrigation, and to furnish water to the Clinton-Sherman Air Force Base. The dams will also provide substantial flood-control benefits. The reservoir areas will be developed for recreational use and for fish and wildlife propagation.

Appropriation title.—Construction and rehabilitation.

WORK PROPOSED, FISCAL YEAR 1961

Fort Cobb division

Irrigation facilities, $74,780.—The program provides for continuation of collection of field data.

Municipal and industrial water facilities, $103,201.—For completion of the construction of these facilities consisting mainly of the Anadarko aqueduct.

Recreation and fish and wildlife, $28,416.—For completion of the basic minimum recreational facilities, and development of the fish and wildlife area at the Fort Cobb Reservoir.

Foss division

Foss Dam and Reservoir, $3,020,829.—Provides for the continuation of dam construction and the land and land right acquisition and reservoir clearing program. Completion of relocation of existing properties in the reservoir area is scheduled. Construction of the dam is expected to be nearly complete by the end of the fiscal year.

Irrigation facilities, $69,719.—The program provides for continuation of collection of field data.

Municipal and industrial water facilities, $3,455,000.—For continuation of construction of these facilities consisting mainly of the Foss aqueduct.

Permanent operating facilities, $19,900.—Provides for the purchase of equipment for the maintenance of Foss Dam and Reservoir and the municipal and industrial water facilities.

Recreation and fish and wildlife, $216,500.—For virtual completion of construction of the basic minimum recreational facilities and development of the fish and wildlife area at the Foss Reservoir.

Service facilities, depreciation, and salvage, —$28,345.—Represents $38,345 cost of service facilities procured in prior years which will be distributed to permanent property in fiscal year 1961 partially offset by $10,000 for procurement of additional service facilities.

Change in total obligations

	Obligations
1960 congressional justification	$40, 051, 500
1961 congressional justification	38, 756, 500
Decrease	1, 295, 000

The decrease is due to revision of the estimate for Fort Cobb Dam to reflect actual quantity underrun of specifications quantities, a reduction in the cost of Fort Cobb Reservoir relocations, and contract prices on municipal and industrial water facilities for Fort Cobb division and on the contract for Foss Dam, the combination of which is a reduction of $2,580,500. These reductions are partially offset by an increase of $1,285,500 in the estimated cost of municipal and industrial water facilities for the Foss division necessitated by the addition of possible participating communities, and extension of aqueduct from Lake Hobart to city of Hobart, Okla.

Chairman HAYDEN. I will include in the record a letter I have received from Senator Kerr requesting the committee to consider an additional $169,000 for recreational facilities at the Fort Cobb Reservoir.

(The letter referred to follows:)

LETTER FROM SENATOR KERR

U.S. SENATE,
Washington, D.C., April 11, 1960.

Hon. CARL HAYDEN,
Chairman, Appropriations Committee,
U.S. Senate.

DEAR CARL: A member of my staff recently discussed with your Appropriations Committee staff a situation which has developed at the Fort Cobb Reservoir (Washita project) near Anadarko, Okla.

At the time of the construction of the reservoir, estimates were made of the required minimum recreational facilities to permit use of the reservoir by the public for recreational purposes. As the project neared completion and the reservoir began to fill, it became apparent that the plans to take care of the public were wholly inadequate.

The Fort Cobb Master Conservancy District requested the National Park Service, through the Bureau of Reclamation, to make a survey and to report the absolute minimum additional facilities that would be required to meet the needs of the public.

I attach hereto a map and a summary statement, including a table which indicates that this year's appropriation should include an additional $169,000 for the purposes above mentioned.

I hope that your committee will favorably consider this item in order that appropriate use may be made of the facilities which have been constructed.

I want you to know that the conservancy district, the county commissioners, and the State of Oklahoma are participating to the extent of their available resources to help meet the demands of the public at this reservoir. We believe the $169,000, which we are requesting, to be a very reasonable share for the Federal Government in this program.

With kindest personal regards, I am,

Sincerely yours,

ROBERT S. KERR.

AUTHORIZATION OF RECREATIONAL FACILITIES

Chairman HAYDEN. I understand that the authorizing act for this project specifically authorized the construction of recreational facilities on a nonreimbursable basis; am I correct?

Mr. DOMINY. Yes, sir.

Chairman HAYDEN. I note in the justifications that $328,000 is programed for such facilities at Fort Cobb.

Approximately $300,000 of this sum has been made available. What type of facilities were constructed with these funds?

Mr. DOMINY. I would like to have Assistant Commissioner Palmer reply to your questions on that, sir.

Mr. PALMER. The facilities normally built by the Bureau of Reclamation under the authority such as contained in this particular project act are what we term minimum basic facilities, they are roads, access roads, the necessary sanitary facilities, and so forth. They include anything that is necessary to protect the public from getting into critical areas of the project, and generally they are the minimum basic protective and health facilities for both the public and the structures.

Now the amount of money about which Senator Kerr has inquired would extend these minimum basic facilities over what we had originally planned. This is another one of those project areas where the recreational use is far and away greater than anything anticipated.

Chairman HAYDEN. It has been remarkable to me that in Texas and Oklahoma, wherever we store water, people flock there.

Mr. DOMINY. They surely do. It is amazing to me to visit the High Plains that I have been familiar with all my life and see about as many boats parked in the garages as I used to see cars.

Mr. PALMER. They say on the day they opened this lake at Fort Cobb to boating you could just about walk across the lake on the boats, and there were so many of them there that they could hardly use them. So the minimum facility is all the Bureau would undertake to do and this I understand to be Senator Kerr's desire that we provide access roads into two additional areas not originally provided with access roads and at those sites we have toilets and garbage cans and wells.

EXPENDITURES REIMBURSABLE

Mr. DOMINY. But there is one problem here. Now all of this money that we spend on minimum basic facilities is reimbursable on most of our projects.

Senator ELLENDER. By whom?

Mr. DOMINY. By the municipal water users and irrigators.

Senator ELLENDER. You mean the whole amount?

Mr. DOMINY. Yes, indeed; except for flood control.

Mr. PALMER. We have a group of projects, as the Commissioner mentioned yesterday, where the Congress has said, "You may build minimum facilities with nonreimbursable money."

I think this instance is one of those projects where we have a small nonreimbursable allocation, but the water users at one time were so enthusiastic about recreation that they wanted to take an unused amount of repayment contract ceiling—we built the project for less than their repayment contract coverage; and at one time they were willing to say, "Take this money and build recreational facilities with it," even though it is reimbursable money.

Senator ELLENDER. But this is not the case.

Mr. PALMER. Doesn't Senator Kerr's letter ask that it be nonreimbursable?

Mr. DOMINY. We had special authorization under section 4 of the authorizing act which reads: "The cost of constructing, operating, and maintaining facilities authorized by this section shall not be charged to or become a part of the costs of the Washita River Basin project."

Chairman HAYDEN. My understanding is that there are a few projects like this where that provision is unique to those few projects.

But ordinarily under the general reclamation law, all these costs are reimbursable.

Mr. DOMINY. That is right.

Chairman HAYDEN. I think that is a matter that the legislative committee ought to look into.

CROOKED RIVER PROJECT, OREGON

Chairman HAYDEN. The budget program includes $2,235,000 for the Crooked River project in Oregon.

The justifications will be included in the record.

(The justification follows:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION

Columbia Basin, Crook County, Central Oregon near the village of Prineville

AUTHORIZATION Act of August 6, 1956, and September 14, 1959 | B/C RATIO 3.7 | Date Nov. 1959

LAND CERTIFICATION by Secretary June 17, 1958 | DEFINITE PLAN REPORT September 1958

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 8,083,000	Appropriations to June 30, 1959	$ 2,463,000
Net Property and Other Transfers	384,000	Appropriations for F. Y. 1960	2,684,175
Cash Advances--Non-Federal		Appropriations to Date	5,147,175
Adjustment		Initial Underfinancing F. Y. 1960	.....
		Appropriations Required for F. Y. 1961	2,235,000
Total to be Allocated	$ 8,467,000	Balance to Complete after F.Y. 1961	$ 700,825

ALLOCATIONS 8/

Irrigation	$ 4,514,000 2/
Deferred	2,084,000 2/
M. & I. Water	
Flood & Nav.	1,363,000
P&WL	490,000
Recreation	16,000
Total	$ 8,467,000

REPAYMENT

Amount Repaid by Irrigators	$ 1,576,060 1/ 2/
Amount Repaid by Power	2,843,000
Amount Assigned but not Contracted for	94,940 3/
Deferred	2,084,000 2/
Non-Reimbursable	1,869,000
Total	$ 8,467,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 222
Repayment of Investment per acre:	
By Irrigators	$ 77 4/
By Power Revenues	140
By Irrigation for space not presently contracted for	5
Payment Capacity per Acre	$ 6.02 5/
Annual Charges:	
O. & M.	$ 3.24 6/
Construction	1.54 4/
Total	$ 4.78

STATUS OF REPAYMENT CONTRACT: Contract executed with Ochoco Irrigation District April 2, 1958 and individual contracts with owners of nondistrict land completed in July 1958, for cost of the portion of irrigation storage in Prineville Reservoir assigned to Crooked River lands.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Prineville Dam and Res.	155,000 AF	75	3-61				
Diversion Dam and Canal		9	7-61				
Ochoco and Barnes Butte Pumping Facilities		7	7-61				
Distribution Canal, Laterals and Drains		7	6-62				
Minimum Health and Safety Facilities 7/		24	6-61				

Acreage Full Supply 9,540 Supplemental Supply 10,870 Total Acres 20,410 Power kw none

Region	Date	Project and State
1	1-18-60	Crooked River Project, Oregon

Footnotes appear on the following page.

BR-167

[1] Represents the amount presently contracted for by the irrigators, to be repaid over a 50-year period. District lands $1,311,400. Nondistrict lands $264,660.
[2] To be repaid by net surplus power revenues from the Dalles Dam project.
[3] Based on Prineville Reservoir space not contracted for by irrigators as of January 1960 plus cost of increased capacity of the diversion dam and canal, the Ochoco and Barnes Butte pumping facilities and the distribution canal required to serve 2,890 acres of lands adjacent to the project area which are proposed for future development.
[4] Excludes deferred irrigation costs and assigned space not presently contracted for.
[5] Weighted average (adjusted) for district and nondistrict lands.
[6] Total operating and power costs prorated equally to the project acreage.
[7] Previously titled "General Property."
[8] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$5,935,000	$4,514,000
Deferred irrigation		2,084,000
Flood control	1,363,000	1,363,000
Recreation	16,000	16,000
Fish and wildlife	490,000	490,000
Total to be allocated	7,804,000	8,467,000

Increase in total to be allocated results from an increase in irrigation facilities. Irrigation allocation in fiscal year 1960 included the allocation to deferred irrigation. The irrigation allocation for fiscal year 1961 is shown in two amounts. The first amount includes an increase of $183,000 associated with the authorized project, while the deferred irrigation includes the unassigned storage allocation plus $480,000 of costs specifically associated with Public Law 86-271 which authorizes excess capacity in the project works.

Agricultural production present and future

Beef production and fattening of feeder cattle along with dairying are the principal agricultural enterprises and are expected to remain so in the future.

JUSTIFICATION

Description.—The project works are located near the town of Prineville in central Oregon. The project will provide a full water supply for 9,540 acres, and a supplemental supply to 10,870 acres. It will also make available 51,200 acre-feet of water for use as a supplemental or full supply on other lands in the Deschutes Basin. It will furnish flood protection; drainage works; recreational facilities and opportunities for increasing the present fishery resources.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Prineville Dam and Reservoir, $633,092.—For completion of Prineville Dam reservoir clearing, and relocation of State Highway No. 27.

Diversion Dam and Canal, $797,813.—This amount is required for completion of the headworks and, with exception of final testing, the 8.2 mile-long diversion canal.

Ochoco and Barnes Butte pumping facilities, $615,011.—Program provides for completion of the pumping plants, with exception of final testing, and substation facilities.

Distribution on canal, laterals, and drains, $514,305.—The distribution canal and laterals will be completed except for final testing. Work will progress on the drain system with two contracts scheduled to be awarded during the fiscal year.

Minimum health and safety facilities, $10,164.—This amount is required for completion of these facilities at Prineville Reservoir area.

Service facilities, depreciation and salvage, −$22,784.—Represents the acquisition of new service facilities offset by service facilities procured in prior years charged to permanent features on a use basis in fiscal year 1961.

Consolidated expenditures and credits, −$12,601.—Represents service facilities acquired on a nonappropriation transfer basis, minor adjustments, and charges from Solicitor's Office financed from appropriation to that office, partially offset by salvage value of stores and equipment acquired in prior years.

Undelivered orders, −$300,000.—Represents the liquidation of prior years obligations against contracts for construction of the diversion headworks and canal, the pumping facilities, and the distribution canal.

Footnotes appear on the following page.

Change in total obligations

	Obligations
1960 congressional justification	$7,420,000
1961 congressional justification	8,083,000
Increase	663,000

Of the total increase, $183,000 covers the cost of buried pipe for a portion of the diversion canal which traverses a populated area on the outskirts of Prineville. The balance of $480,000 represents the additional cost of constructing to a larger capacity the diversion dam and canal, the Ochoco and Barnes Butte pumping facilities and the distribution canal to serve an additional 2,890 acres of adjacent lands to be developed with water from unassigned space in Prineville Reservoir, authorized on September 14, 1959, under Public Law 271, 86th Congress, 1st session.

INCREASED CAPACITY THROUGH SPECIAL ACT

Chairman HAYDEN. Are there any questions or comments about it?

Mr. DOMINY. Well, this is a project that we got authorized last year through a special act to put some increased capacity in the primary canal so as to be able to serve Crooked River extension area which was not at that time authorized, and I am happy to report that investigation is moving along and that we are fully assured that the extra capacity will be put to good use eventually.

TALENT DIVISION, ROGUE RIVER BASIN PROJECT, OREGON

Chairman HAYDEN. The budget program includes $2,450,000 for the continuation of construction of the Talent Division of the Rogue River Basin project in Oregon.

(The justifications will be included in the record.)

(The justification follows:)

PP-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
North Pacific Basin, Jackson County, southwestern Oregon

AUTHORIZATION P.L. 606, 83rd Congress, 2nd Sess. approved 8-20-54 | B/C RATIO 1.64 | Date 11-23-59

LAND CERTIFICATION by Secretary October 27, 1955 | DEFINITE PLAN REPORT approved by Commissioner 11-1-55

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 22,992,000	Appropriations to June 30, 1959	$ 17,109,000
Net Property and Other Transfers	708,000	Appropriations for F. Y. 1960	2,367,093
Cash Advances--Non-Federal		Appropriations to Date	19,476,093
Adjustment	1/ 573,200	Initial Underfinancing F. Y. 1960	312,000
		Appropriations Required for F. Y. 1961	2,450,000
Total to be Allocated	$ 24,273,200	Balance to Complete after F.Y. 1961	$ 753,907

ALLOCATIONS 8/

Irrigation	$ 14,113,600
Power	9,336,500
M. & I. Water	
Flood & Nav.	579,100
Recreation	140,000
Fish & Wildlife	104,000
Total	$ 24,273,200

REPAYMENT

Amount Repaid by Irrigators	$ 7,075,500
Amount Repaid by Power	16,374,600
Amount Repaid by M. & I. Water	
Non - Reimbursable	823,100
Total	$ 24,273,200

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 789 2/
Repayment of Investment per acre:	
By Irrigators	$ 381 3/
By Power Revenues	408
By M.& I.Water Users	

Payment Capacity per Acre	$ 12.78
Annual Charges:	
O. & M.	$ 6.02 4/
Construction	6.35 5/
Total	$ 12.37

STATUS OF REPAYMENT CONTRACT: Talent Irrigation District contract ($5,810,000) for a 60-year repayment period was executed August 27, 1956. Sale of water, originally reserved for development of acres (2,680) under the Phoenix Lateral, now covered in repayment contracts executed 7-1-58 with Medford Irrigation Dist., and 7-16-58 with the Rogue River Valley I.D. under which $1,265,500 will be returned over a 60-year repayment period.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Howard Prairie Dam and Res.	62,000 AF	100	9-59	Drains, Channel Improvements	30 Mi.	4	Indef.
Emigrant Dam and Reservoir	40,000 AF	60	6-61	Green Springs Powerplant and Switchyard	16,000 Kw	99	9-59
Keene Creek Dam and Reservoir	370 AF	100	8-59	Minimum Health & Safety Fac.		29	3-61
Collection Canals 60-65 cfs	16 Mi.	85	12-60	Fish Facilities-Hyatt Pr. Dam	7/	10	11-60
Delivery Canals & Laterals	120 Mi.	80	6-62	Permanent Operating Facilities	7/		6-62
Sublaterals		10	6-62				

Acreage Full Supply 5,310 Supplemental Supply 23,801 Total Acres 6/ 29,111 Power kw 16,000

Region	Date	Project and State
1	1-18-60	Rogue River Basin Project, Talent Division, Oregon

BR-173

Footnotes appear on the following page.

[1] Includes $573,200 interest during construction.
[2] Irrigation allocation ($14,133,600) less pro rata share of costs associated with 9,000 acre-feet of water sold to Medford and Rogue River Valley Irrigation Districts ($2,010,000) divided by the new Talent district acreage (15,231 acres).
[3] Based on the contract obligation for the Talent Irrigation District ($5,810,000).
[4] Talent irrigation operating cost less pro rata share of costs associated with water sold to the Medford and Rogue River Irrigation Districts.
[5] Per acre charge over a 60-year repayment period.
[6] Revised acreage:

	Full	Supplemental	Total
Talent Irrigation District	5,310	9,921	15,231
Medford Irrigation District		9,000	9,000
Rogue River Valley Irrigation District		4,880	4,880
Total	5,310	23,801	29,111

[7] Previously titled "General property."
[8] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$14,107,000	$14,113,600
Power	9,375,000	9,336,500
Flood control	580,000	579,100
Recreation	140,000	140,000
Fish and wildlife	104,000	104,000
Total to be allocated	24,306,000	24,273,200

Total to be allocated is reduced by recomputation of interest during construction. Minor changes in flood control, irrigation and power result from internal adjustments within the cost estimate.

Agricultural production present and future

The crops of the project consist of cereals, and forage crops, vegetables, seeds, fruits, nuts, and family orchards and gardens. It is estimated that there will be very little deviation in the future from the present crop pattern.

JUSTIFICATION

Description.—This project, located in southwestern Oregon, will provide an adequate water supply for 29,111 acres of irrigable land, develop 16,000 kilowatts of power, reduce flood damages, and produce incidental benefits associated with recreation and fish and wildlife. Project facilities which will be completed and in operation in fiscal year 1961 will include all storage, delivery, and collection canals and power facilities and a major portion of the laterals and sublaterals. Construction of the drainage system has been deferred until definite needs are known. The Bureau will operate and maintain the power facilities and initially the storage and collection canal system with appropriated funds. Laterals and sublaterals will be operated by the irrigation district.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Emigrant Dam and Reservoir, $1,134,262.—This amount will provide for completion of the construction and enlargement of Emigrant Dam and an access road.

Collection canals, $40,000.—Required for completion of the Daley Creek collection canal.

Delivery canals and laterals, $1,105,805.—Work will be completed on the Ashland lateral, east lateral, and Talent laterals. Contracts for enlargement and extension of the existing west lateral will be awarded.

Sublaterals, $131,305.—This amount will provide for enlargement and extension of the existing sublateral system concurrent with work on the lateral system.

Drains, $1,000.—To cover minor costs associated with drainage studies.

Minimum health and safety facilities, $60,425.—Program includes completion of the minimum health and safety facilities at Howard Prairie Reservoir and provides for like facilities at Emigrant Reservoir.

Fish facilities, Hyatt Prairie Dam, $12,404.—For installation of fish screening facilities at Hyatt Prairie Dam.

Permanent operating facilities, $18,271.—Provides for acquiring the balance of the operating equipment consisting of a four-wheel drive pickup, and shop equip-

ment, and miscellaneous tools plus minor construction items for the permanent operating facilities at Talent.

Service facilities, depreciation, and salvage, —$31,100.—For minor work at the Talent field headquarters and the purchase of automotive and work equipment totaling $18,000 which is more than offset by the distribution of $49,100 of prior costs of service and camp facilities to the permanent properties and to salvage.

Consolidated expenditures and credits, —$13,372.—Represents nonappropriation transfer of equipment and materials from other Bureau projects and charges from Solicitor's Office financed from appropriation to that Office.

Undelivered orders, —$9,000.—Represents liquidation of prior year's obligations.

Change in total obligations

	Obligations
1960 congressional justification	$22,992,000
1961 congressional justification	22,992,000
No change	----------

DEER DROWNINGS

Chairman HAYDEN. Any comments?

Mr. DOMINY. This is going along very well. The only problem of unusual interest that I would like to mention to the committee is we had a little difficulty with deer falling in our canal, and drowning up there in this very beautiful mountain country. I don't think it is any worse than has been the hazard of deer getting killed on highways in mountain areas, but we have cooperated by putting in a series of crossings at intervals across the canal, and we hope that this will take care of the problem. I think it will, unless the deer were actually trying to use the canal as a drinking fountain.

In this case they will still slip on in, I am afraid.

Senator ELLENDER. Are the banks very steep?

Mr. DOMINY. Yes. The canal—the banks are very steep and they are concrete lined, but I doubt if it was for water. I think they were trying to cross it because there are plenty of springs and seeps up in that area that the deer would normally use.

Chairman HAYDEN. Isn't it nothing more than a sheep bridge?

Mr. DOMINY. That is all; we put in some plank crossings and put some dirt across on top.

Senator ELLENDER. How wide is the canal?

Mr. DOMINY. I imagine this canal is roughly 15 to 30 feet across the top.

Senator ELLENDER. I guess they become acquainted with the bridges you provide for them. Do you put signs up?

Mr. DOMINY. Yes, we put those "deer crossing" signs, like you see on the highways. [Laughter.]

Mr. BENNETT. I think we should advise you that the powerplant at Green Springs went into operation May 2 and is now in commercial production.

Mr. DOMINY. Incidentally we put those crossings in so the deer would have crossings available at 300 foot intervals. That seems like almost bridging the canal but we do try to get along with these situations wherever we run into them.

BULLY CREEK EXTENSION, VALE PROJECT, OREGON

Chairman HAYDEN. The budget program includes $173,000 for the Bully Creek extension of the Vale project in Oregon. This is a new project authorized by Public Law 86–248.

The justifications will be included in the record.

(The justifications follow:)

PF-45
(7-56)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Eastern boundary of the State of Oregon, on Bully Creek, a tributary of the Malheur River, about nine miles northwest of the town of Vale, Oregon.

AUTHORIZATION Act of September 9, 1959 | B/C RATIO 3.06 4/ | Date Mar.19,1959

LAND CERTIFICATION March, 1961 (Est.) | DEFINITE PLAN REPORT: To be submitted November 1960

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 3,210,000	Appropriations to June 30, 1959	$
Net Property and Other Transfers	116,000	Appropriations for F. Y. 19 60	
Cash Advances--Non-Federal		Appropriations to Date	.....
Adjustment		Initial Underfinancing F. Y. 1960	
		Appropriations Required for F. Y. 1961	173,000
Total to be Allocated	$ 3,326,000	Balance to Complete after F.Y. 19 61	$ 3,037,000

ALLOCATIONS 1/

Irrigation	$ 1,700,000
Power	
M. & I. Water	
Flood & Nav.	1,497,000
Recreation	60,000
Fish & Wildlife	69,000
Total	$ 3,326,000

REPAYMENT

Amount Repaid by Irrigators 2/	$ 1,700,000
Amount Repaid by Power	
Amount Repaid by M. & I. Water	
Non - Reimbursable	1,626,000
Total	$ 3,326,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 50	Payment Capacity per Acre	$ 6.60
Repayment of Investment per acre:		Annual Charges:	
By Irrigators	$ 50	O. & M.	$ 3.02
By Power Revenues		Construction 3/	2.92
By M.& I. Water Users		Total	$ 5.94

STATUS OF REPAYMENT CONTRACT: Repayment contract scheduled for execution in March, 1961.

PRINCIPAL FEATURES

	Size or Cap.	2/ Completion % 1-1-60	2/ Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Bully Creek Dam & Reservoir	32,000 A.F.	0	6/64				
Laterals	13 Mi.	0	6/64				
Minimum Basic Health & Safety Facilities		0	12/63				
Permanent Operating Facilities		0	6/62				

Acreage Full Supply — Supplemental Supply 4/ 34,145 Total Acres 34,145 Power kw - - -

Region	Date	Project and State
1	1-18-60.	Vale Project, Bully Creek Extension, Oregon

Footnotes appear on the following page.

BR-181

[1] Based on the latest cost allocation data included in the Secretary's report dated Mar. 25, 1959.
[2] Based on a 50-year period.
[3] Includes a charge of $1.92 per acre on the 1947 contract.
[4] Includes approximately 32,000 acres of presently irrigated land on Vale project.
[5] Planning funds only.

Agricultural production present and future

The type of crops will continue to be grains, row crops, forage, etc., with supplemental water from Bully Creek extension, but there will be a greater yield per acre as the result of an adequate water supply.

JUSTIFICATION

Description.—The primary purpose of the Bully Creek extension is to provide supplemental irrigation storage for the existing Vale project and additional flood protection in Malheur County, Oreg. The proposed facilities include Bully Creek Dam, an earthfill structure, creating a 32,000-acre-foot reservoir, a 2.5-mile feeder canal from the Vale main canal to the reservoir, and modification of the distribution system within the project area. The dam will be located about 9 miles northwest of Vale, Oreg., on Bully Creek, a tributary of the Malheur River. In addition to furnishing 34,145 acres of land with supplemental water for irrigation, the project will provide flood benefits and benefits incident to fish and wildlife, and recreation.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Bully Creek Dam and Reservoir, $166,000.—The program provides for preparation of the definite plan report, collection of field design data preparatory to issuance of specifications and the initial purchase of right-of-way for borrow areas and access roads.

Laterals, $5,000.—Represents a share of the costs of definite plan report, and repayment contract negotiations.

Minimum basic health and safety facilities, $2,000.—Represents a share of the costs of the definite plan report, and repayment contract negotiations.

Changes in total obligations

	Obligations
1960 congressional justification	(1)
1961 congressional justification	$3,210,000

[1] Not included in fiscal year 1960 congressional justifications.

DESCRIPTION OF PROJECT

Chairman HAYDEN. Describe this project to the committee.

Mr. DOMINY. Well, the Bully Creek project is a dam and reservoir which has been sorely needed by this project for a good many years.

The Vale project was built as a Federal reclamation project a good long while ago, and it has been a very successful project but it has had a short water supply there too many years, and furthermore, this Bully Creek causes flood damage to the town of Vale, and adjacent area periodically.

So we have had the plan for a good many years to build the Bully Creek Dam both for flood control and for supplemental irrigation and storage.

And the water users are prepared to pay the full costs of that except that portion allocated to flood control. I am very pleased personally to have it in this budget because it is a structure that has been needed to round out this successful project and make it a greater economic security.

Chairman HAYDEN. How is the total estimated cost of $3,200,000 allocated?

Mr. DOMINY. Of that total estimated cost, $1,700,000 is allocated to irrigation, $1,497,000 is allocated to flood control——

Senator ELLENDER. And navigation?

Footnotes appear on the following page.

Mr. DOMINY. Well, there is really in this case——

Senator ELLENDER. That is what I was going to ask.

Mr. DOMINY. That is a form—we have flood control and navigation lumped together on this form—but in this case it would be strictly flood control except eventually of course that water would get down into the navigable reaches.

Senator ELLENDER. But it is all flood control?

Mr. DOMINY. Except for the irrigation allocation it is all flood control allocation in this particular case. A recreational allocation for $60,000 and a fish and wildlife allocation of $69,000 for a total cost of the feature of $3,326,000.

Senator ELLENDER. I notice you charge recreation there $60,000. That Federal is not reimbursable, is it?

Mr. DOMINY. That is another one of these cases under modern authorization practices, the Congress has been permitting us small allocations to fish and wildlife and recreation where the project serves beneficial purposes of that sort.

But this is a very recent addition to reclamation procedures.

Senator ELLENDER. These facilities are then rented out to any concessionaires. Is that right?

RECREATIONAL USE

Mr. DOMINY. The manner in which—these are just minimum basic facilities that we provide in every case. Now what we try to do and this is supported by the views of Congress, the first thing that is done on any of our reservoirs is to determine whether the recreational use would be so extensive as to be of national interest.

Now that is true only in very limited cases like at Hoover Dam and at Glen Canyon on Lake Powell and at Shasta Dam and Grand Coulee Dam and on the tremendously large reservoirs, and in those cases, the National Park Service actually takes over the operation of it just like they would a national park, and put it into their system.

If it is determined to be of only regional or State interest then we try to get a State agency to manage the recreational facilities, but in any case we would be providing the minimum basic facilities as part of the project.

In this case then it would undoubtedly be considered of local interest and we would attempt to have——

Senator ELLENDER. If the Park Service takes it over, or the State agency takes it over, have they the authority to lease that to concessionaires?

Mr. DOMINY. We have also provided in our agreement with them that they could under certain limitations provide for concessionaire supplying supplies and so forth.

Senator ELLENDER. Who gets that money?

Mr. DOMINY. The agency that we contract with to operate.

Senator ELLENDER. It is paid to the Park Service or the State agency and the Federal Government gets nothing back in that case.

Mr. DOMINY. But we are relieved of the responsibility of trying to manage that recreational use. If we can get it turned over to some other agency closer to the area of use, we think that is highly desirable.

Senator ELLENDER. I presume that if either the Park Service or the State agency should take the facility over they will rent it for enough to maintain costs.

Mr. DOMINY. That is the general idea.

Senator ELLENDER. Why do you not do that if the Federal Government manages the thing?

Mr. DOMINY. We are not in the recreation business, per se and we think if it is of national interest the Park Service ought to do it.

If it is a State interest only State parks or a State agency ought to do it.

Senator ELLENDER. Are there any that you manage?

Mr. DOMINY. Only if we can't get rid of it to somebody else.

Senator ELLENDER. Do you charge an entrance fee when you manage them?

Mr. DOMINY. No, we have never made a charge for access to any of these public reservoirs.

MANAGEMENT JURISDICTION

Senator ELLENDER. What percentage of the facilities that you provided for is under your jurisdiction as far as management is concerned?

Mr. DOMINY. I will have Mr. Palmer answer that.

Mr. PALMER. Of the 170 to 180 reservoirs constructed by the Bureau there are something less than 40, still managed by the Bureau of Reclamation, and in almost every instance these are reservoirs that were built in the very early stages of the reclamation program. They are reservoirs for which up to this time we have never been able to negotiate and conclude an agreement with an agency competent to take over the recreational features. One of our major problems, preventing completion of such agreement in these cases, is that no basic facilities are available.

Senator ELLENDER. Why do not the local people get interested in that? Why impose on the Government that much? It strikes me if you have a lake that brings benefits to the locality, why shouldn't the local people be ready and willing to take over the management of it?

Mr. PALMER. This is precisely our theory. We feel the best agency should take it over. But in some of the old projects, like the Rio Grande, where we have a million visitors a year, no fully acceptable minimum facilities are provided. So you have a lake there and it is in an area of extremely dry country and people flock to it. Someone has to do something about it.

Now, we negotiated with the State, which is the agency that probably will take it over ultimately. And they are helpless——

Senator ELLENDER. They will not as long as——

Mr. PALMER. In the initial investment to where it could be managed successfully by them. They tell us this.

Senator ELLENDER. As I understand it, of the 170 recreation areas that you now have, in round figures, about 130 of those are maintained by some Government agency, State or Federal.

Mr. PALMER. Or an irrigation district in some instances.

Senator ELLENDER. And 40 are not. Can you estimate the cost to the Government of maintaining those 40 facilities?

Mr. DOMINY. Well, actually there is no direct cost to the Federal Government maintaining those because anything that is being expended is part of the annual operation and maintenance cost which is paid by the water user. Fully repaid. It is not under our direct

management to the extent that we have a custodian there that is supplying picnic tables and firewood or anything like that at all. It just means on the old projects there were no basic facilities provided. There were no special roads built to get people into that. There was just the main road in there and that was all that was required. No boat launching docks, picnic tables, or anything else. We just didn't do it in the early days.

Senator ELLENDER. Then I presume that those facilities were constructed on a reimbursable basis.

Mr. DOMINY. Yes, sir.

RECREATIONAL FACILITIES

Senator ELLENDER. So the Government is not out anything except what it paid the irrigators that use the water.

Mr. DOMINY. But as we mentioned here the other day on this broad question, I certainly think the Congress could well examine the total policy of the Federal Government in terms of financing recreational facilities at public expense. I don't believe at the moment there is very much consistency between what the Forest Service may do, for example, and what is done at Army reservoirs and what is done at ours.

Chairman HAYDEN. I understand Senator Kerr has a bill relating to this subject.

Mr. DOMINY. There is a general bill of this subject.

Senator ELLENDER. What is the status?

Mr. WOODRUFF. I think it is on the Senate calendar. It has been reported by the Public Works Committee.

Senator ELLENDER. Do you know what it does?

Mr. WOODRUFF. It establishes a formula for determining recreation benefits in evaluating projects.

Senator ELLENDER. I am going to look into that one. You know, they are going to give it to the Federal Government as much as they can. It strikes me that the local people ought to be the ones interested enough to take hold of these projects and let the Federal Government get out of it. I think we are spending enough as it is now. The States, as well as these other agencies, will continue to lean on the Federal Government as long as we permit it.

Mr. DOMINY. I don't disagree with that observation at all. My plea is there ought to be some uniformity in the manner in which it is handled.

Chairman HAYDEN. What is the status of your repayment contract?

Mr. DOMINY. The repayment contract for the Bully Creek Dam is being negotiated and it is scheduled to be executed this year. I am sure we will have it and we will have it, of course, before we start construction.

Chairman HAYDEN. What crops are grown on land served by this project?

Mr. DOMINY. This is a general agricultural area under irrigation, primarily sugar beets and feed crops and alfalfa hay and livestock production, some row crops.

KLAMATH PROJECT, OREGON-CALIFORNIA

Chairman HAYDEN. We have the Klamath project, Oregon-California. The budget program includes $868,000 for the continuation of construction of the Klamath project in Oregon and California. The justification will be included.

(The justifications referred to follow:)

PF-45
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION In Southern Oregon in Klamath County and in Modoc and Siskiyou Counties in North-Central California. Includes Upper Klamath River and Lost River Basins.

AUTHORIZATION By Secretary, May 15, 1905 | B/C RATIO Not Available Date

LAND CERTIFICATION None required | DEFINITE PLAN REPORT None--Construction initiated prior to DPR requirement

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 19,271,130	Appropriations to June 30, 1959	$ 15,245,987
Net Property and Other Transfers	283,591	Appropriations for F. Y. 1960	508,950
Cash Advances--Non-Federal		Appropriations to Date	15,754,937
Adjustment		Initial Underfinancing F. Y. 19	
Total to be Allocated	$ 19,554,721	Appropriations Required for F. Y. 1961	868,000
		Balance to Complete after F.Y. 1961	$ 2,608,193

ALLOCATIONS 2/		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$ 19,459,978	Amount Repaid by Irrigators	$ 19,459,978	Irrig. Invest. per Acre	$ 90.
Power		Amount Repaid by Power		Repayment of Investment per acre:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 90.
Flood & Nav.				By Power Revenues	
Other 1/	94,743	Non - Reimbursable	1/ 94,743	By M.& I.Water Users	
Total	$ 19,554,721	Total	$ 19,554,721	Payment Capacity per Acre	Not $ Available
				Annual Charges: O. & M.	$
				Construction	
				Varies according to divisions	$

STATUS OF REPAYMENT CONTRACT: Contracts with eleven irrigation districts and several hundred individuals have been executed over the last 35 years within the basic principles of the Reclamation Law of 1902 and the Warren Act. There are no delinquents in repayments by either district or individuals and several contractors have completed payment of the total amount.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Completed Facilities	109,209 Ac.	100					
Lower Klamath Lake Division	25,798 Ac.	26	6-65				
Tule Lake Division	79,450 Ac.	77	6-64				

Acreage Full Supply 214,457 Supplemental Supply ____ Total Acres 214,457 Power kw ____

Region	Date	Project and State
2	1/18 '60	Klamath project, Oregon-California

BR-185

1 Chargeoff by Congress: Act of May 25, 1926 (44 Stat. 639), and act of Aug. 2, 1951 (65 Stat. 152).

2 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$18,527,461	$19,459,978
Other		94,743
Total to be allocated	18,527,461	19,554,721

The increase in total to be allocated results from the increase in total estimated cost of the projects irrigation facilities. Costs allocated as "Other" represent amounts charged off or declared nonreimbursable by the act of May 25, 1926, and the act of Aug. 2, 1951. These amounts have been previously shown as allocable to irrigation.

Agricultural production present and future

Principal crops grown on the project are cereal grains, forage alsike clover seed, potatoes, and onions.

JUSTIFICATION

Description.—The project is located in the central area of the California-Oregon border. Water supply is made available from three reservoirs—Upper Klamath Lake, Clear Lake, and Gerber Reservoir, and is used to supply a full

irrigation supply for 214,457 acres. Both gravity flow and pumping are used to deliver water with return flows and water reuse characterizing the project. The Bureau operates the reservoirs and some of the canals with water users and appropriated funds while the other features are operated by either the Klamath Irrigation District or the Tule Lake Irrigation District.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Tule Lake Division, $873,030.—The program provides for the second group of pumping plants, and completion of the first two lateral and drain construction contracts in sump 2, and starting on the third. In sump 3 a pumping plant and one lateral and drain construction contract are to be completed, and design data prepared for two additional lateral and drain contracts and specifications issued on one of them. Collection of design data will be completed and designs and specification work started on the secondary drainage in sump area 2.

Service facilities, depreciation, —$5,030.—For the distribution of prior year costs of service facilities to the permanent properties.

Change in total obligations

	Obligations
1960 congressional justification	$18,140,738
1961 congressional justification	19,271,130
Increase	1,130,392

This increase is due primarily to the inclusion of secondary drainage in sumps 2 and 3 to complete the program of reclaiming lands within these areas.

AMOUNT NEEDED TO COMPLETE PROJECT

Chairman HAYDEN. Are there any questions or comments on this project?

Mr. DOMINY. I believe not, Mr. Chairman.

Senator ELLENDER. I notice that the balance to complete would be $2,648,000?

Mr. DOMINY. Do you want to comment on that, Mr. Palmer?

Mr. PALMER. Senator Ellender, this is a project that has actually been under construction for a long time. The balance to complete would envision certain work to be done on the authorized features, if, as, and when we do it.

Senator ELLENDER. I notice the entire Federal obligation is $19,554,271, and the amount to be repaid is almost the same amount. Why is that?

Mr. PALMER. This is——

Senator ELLENDER. Is this a project that you are adding something to it?

Mr. PALMER. No. This is a totally new federally built project. It is one of the most successful projects in the Bureau's program. It consists of unwatering old lake beds and development of irrigation facilities.

Senator ELLENDER. Unwatering? You mean lifting the water?

Mr. PALMER. No. Draining the swamp area and the—draining in the wet season and application of water in the dry season. It produces quite a variety of specialized crops of high value. The repayment contracts cover virtually the entire cost of the project.

PERIOD OF REPAYMENT

Senator ELLENDER. But that is repaid, though, over a period of 40 years without interest. Is that right?

Mr. DOMINY. That is right, sir.

Mr. PALMER. One interesting thing about this. You asked about the deferred work. There are many complete areas of federally owned land in this project area that have not been opened to homesteading; these are now returning to the Treasury up to a half million dollars each year in base revenues.

Senator ELLENDER. We have thousands of acres of land in Louisiana that I would like to be eligible for such a bonanza as this—to be able to get the Federal Government to walk in, put up all the money to construct the necessary canals, put in the pumps and then let the owner of the land repay for this work in 40 years at no interest. That would be a wonderful project.

Mr. DOMINY. I think you have many areas in Louisiana that would be equally in the national interest to do that as was proved here on the Klamath project.

Senator ELLENDER. I know so, but we are not so furtunate. We have got to organize our own districts, sell bonds, and pay 6 or 7 percent on the bonds in order to be able to do that. We are not so fortunate as to be able to get the Government to do it, particularly here where there is no flood control involved but purely and simply an irrigation project. I think that is going beyond what the law intended.

Mr. DOMINY. Mr. Ellender, this is exactly the kind of project that was basic to the Reclamation Project Act of 1902.

Senator ELLENDER. No, sir. I can't believe it because most of it was based on flood control, navigation, and if you could put irrigation into it and let the irrigators pay a small amount or some part of it, it would be all right. But the primary purpose, as I would understand it, would be to relieve people from floods and things of that kind. But here you have a project that is purely irrigation and I do not think it is right to get the Federal Government to put up all of the money and then let the irrigators pay back in 40 years without interest.

Mr. DOMINY. Well, the original act of 1902 was predicated on the premise that it was in the Federal interest to develop and settle the areas of the West.

Senator ELLENDER. I know that, but that was mostly in the desert, but here you have a lake bottom——

Mr. DOMINY. Yes, but——

Senator ELLENDER. And you have a project which is not concerned at all with navigation, as I said, nor flood control. And it is one that the owners could have done themselves the same as we do in Louisiana.

But I am not going to argue it any further.

Mr. DOMINY. A good part of this land was public land.

Senator ELLENDER. We have got some public land down in Louisiana, too, and I don't suppose we will get the Government to help us out in any way. In fact, I would not even try to get such a windfall, because I think it is basically in opposition to the original purposes of the act.

LOWER RIO GRANDE REHABILITATION PROJECT, LA FERIA DIVISION, TEXAS

Chairman HAYDEN. La Feria division, lower Rio Grande rehabilitation project, is next. The budget program includes $500,000 of

the initiation of rehabilitation of the facilities of this existing project. This project was authorized by Public Law 86-357.

The justifications will be included in the record.

(The justifications follow:)

PP-45
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Rio Grande and Gulf Basin--Lower Rio Grande Valley, Texas in Cameron County.

AUTHORIZATION Act of September 22, 1959 (73 Stat. 641) | B/C RATIO 3.9 3/ | Date Oct. 1959

LAND CERTIFICATION Scheduled July 1960 | DEFINITE PLAN REPORT Scheduled for submittal to Commissioner July 1960

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 5,737,990	Appropriations to June 30, 1959	$ -------
Net Property and Other Transfers	34,010	Appropriations for F. Y. 1960	-------
Cash Advances--Non-Federal		Appropriations to Date	-------
Adjustment		Initial Underfinancing F. Y. 1960	-------
		Appropriations Required for F. Y. 1961	500,000
Total to be Allocated	$ 5,772,000	Balance to Complete after F.Y. 1961	$ 5,237,990

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE		
Irrigation	$ 5,772,000	Amount Repaid by Irrigators	$ 1/5,772,000	Irrig. Invest. per Acre	$ 216	Payment Capacity per Acre $12.15
Power		Amount Repaid by Power		Repayment of Investment per acre:		Annual Charges:
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 216	O. & M. $ 2/
Flood & Nav.				By Power Revenues		Construction 6.16
		Non-Reimbursable		By M & I Water Users		
Total	$ 5,772,000	Total	$ 5,772,000			Total $ 6.16

STATUS OF REPAYMENT CONTRACT: Contract with La Feria Water Control and Improvement District, Cameron County No. 3 for $5,750,000 executed December 1959, and validation is anticipated early in calendar year 1960. $22,000 of the total to be repaid has been contributed by the District.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Storage Basin	2,000 A.F.	-	6-62				
Pumping Plants	50-285-375cfs	-	9-61				
Main canal and laterals	26,660 Ac.	-	6-65				
Drains	32,750 Ac.	-	6-65				
Permanent Operating Facilities	-	-	6-62				

Acreage Full Supply 26,660 | Supplemental Supply - | Total Acres 26,660 | Power kw -

Region	Date	Project and Stage
5	1-18-60	Lower Rio Grande Rehabilitation Project, La Feria Division, Texas

BR-191

1/ 35-year repayment period.
2/ The rehabilitation work will result in a saving in current O. & M. costs.

Agricultural production present and future

Major crops presently being produced are citrus, cotton, grains, and vegetables. No significant change in type of crops produced anticipated following rehabilitation.

Appropriation title.—Construction and Rehabilitation.

Description.—This division of the project is in Cameron County in the lower Rio Grande Valley, Tex. Its purpose is to provide for the complete rehabilitation of the existing irrigation and drainage works of the La Feria Water Control and Improvement District, Cameron County No. 3. The plan of rehabilitation is designed to permit more economical operation and maintenance of the district works, provide more efficient water deliveries, reduce distribution system losses, and reduce flooding of land in some areas. It contemplates delivery of water to the full 26,660 acres of irrigable land. No major changes in location are proposed for the canals, laterals, and drains.

The plan provides for a new and larger intradistrict water storage reservoir of 2,000 acre-feet capacity, repair or replacement of deteriorated existing canal lining, installation of concrete lining or pipes in most of the presently unlined laterals of the irrigation system, repair or replacement of deteriorated or inadequate irrigation and drainage structures, cleaning and clearing of all earthen canals and drains, and construction of maintenance access roads along all open canals, laterals, and drains.

Work proposed, fiscal year 1961

Storage basin, $20,000.—Provides for the initiation of collection of field data.

Pumping plants, $175,000.—For the initiation of rehabilitation work on the pumping plants.

Main canal and laterals, $250,000.—For the initiation of collection of field data on the main canal and for work on the laterals consisting of the initiation of con-

struction on the first rehabilitation contract; the start of purchase of concrete pipe; and the collection of field data for the second rehabilitation contract.

Drains, $10,000.—Program provides for the initiation of collection of field data.

Permanent operating facilities, $32,000.—For the acquisition of a trencher and tractor with front-end loader and back hoe to be used by the district in maintenance activities.

Service facilities, depreciation, and salvage, $13,000.—Represents $15,000 for procurement of service facilities items which is partially offset by $2,000 to be distributed to permanent property during the year.

Changes in total obligations

	Obligations
1960 congressional justification	[1]
1961 congressional justification	$5,737,990

[1] Not included in fiscal year 1960 congressional justifications.

DESCRIPTION OF PROJECT

Chairman HAYDEN. Describe this project for the committee.

Mr. DOMINY. Mr. Chairman, this project is the rehabilitation and betterment proposal of an existing project that was originally built by private capital investment rather than Federal investment, and it has been in operation for a good long while. It is in need now of a realinement of the canals and drains, lining some of their canals and improvement of old facilities that have pretty well reached the end of their useful life.

It was just a little bit too big to fit within the limits of the Small Projects Act, since that is limited to $5 million, and therefore a special project report was submitted and a special act was passed last session. And the repayment contract was executed in December 1959 and will be validated very shortly.

Mr. STAMM. It was validated February 1.

Mr. DOMINY. It has already been validated. So we are ready to go on this and we are happy to have it included as one of the new starts of fiscal 1960.

Chairman HAYDEN. Representatives of the district appeared before the subcommittee in support of funds for the project. Since that time, the committee has received numerous letters from farmers in the district in opposition to the project, including a letter from Mr. Murray A. Godfrey, chairman of the Taxpayers' Committee of the La Feria Water Control and Improvement District No. 3. I will include this letter in the record.

(The letter referred to follows:)

HARLINGEN, TEX., *April 19, 1960.*

Re La Feria Water Control and Improvement District No. 3, Cameron County, Tex., project.

The Honorable CARL HAYDEN,
Senator from the State of Arizona, Chairman of the Appropriations Committee, U.S. Senate, Washington, D.C.

DEAR MR. HAYDEN: I wish to submit the following for your information as a member of the Appropriations Committee, which we believe are valid reasons for making a decision against the appropriation of funds for the project between the Reclamation Bureau and the La Feria Water Control and Improvement District No. 3 of Cameron County, Tex.

Two of the three voting precincts are strongly against this contract. These two precincts, Santa Rosa and Wilson tract, are predominantly rural areas who will have to pay a large share of this burdensome and enormous final debt of $6 million which amounts to over $220 per acre on the approximately 27,000 acres under irrigation in the La Feria district. The third precinct surrounds the town

of La Feria and has only small acreages in the main, and many of these small farmers and part-time farmers have been misled into thinking they are getting something for nothing since the money is interest free unless the payments to the Federal Government become delinquent. Many voters around La Feria only own either a home or 5 to 10 acres and it will not be too burdensome to them since many have jobs in town. The two rural precincts voted against this contract in both elections. The first bond election failed to carry by even a simple majority in the entire district. The second election called by the district water board only 2 days after the first election carried by only 78 votes over a simple majority. The reasons we farmers are opposed to this project are:

1. The project calls for no increase in the length of the existing drains nor for any new drains to be constructed. We know that a good many more miles of drain are needed to serve the needs of many farms not now served by any drain. Some acreage is being "salted out" by a high water table from too heavy irrigations. Hard and fast rains of over 2 inches cause crops to be lost where no drainage facilities are provided. Information that no more drainage is provided for in the contract can be found in House Document 128, La Feria rehabilitation project of Texas, on pages 4, 21, and 28. Mr. Joe Kilgore, Representative from this district of Texas, has actually been on the ground in this district this past November 1959, and observed this deplorable condition firsthand.

2. The project calls for leaving the 12.9 miles of main canal and 8 miles of large main laterals still of dirt construction as they are at the present time. These large canals and laterals run through practically the entire district and we feel a rehabilitation project of this magnitude in this small a district should at least partially solve this important problem. After all, what this project is supposed to do is to conserve water and stop seepage problems. Information on this can be found in this same House Document 128 on page 14. Mr. Joe Kilgore, our Representative in Congress, also saw this situation first hand last November.

3. The Tio Cano Lake and drainage and seepage water problem is not solved. This lakebed soil is too heavy and has too much salt and alkali to be suitable for farming purposes, yet this very expensive rehabilitation project, which will take until A.D. 2000 to repay (if we are able to keep up the payments), calls for this brackish water to be continued to be pumped into one of our fresh-water canals and used to irrigate some 5,000 acres of the district. A goodly portion of the above-mentioned 5,000 acres has expensive citrus groves, most just recently planted, and the balance is of good quality cotton and vegetable land. Some 2,000 acre-feet of this poor-quality drain ditch water is pumped into the Wilson irrigation canal each year as estimated by the Reclamation Bureau. A certified copy of the analysis of this drain-ditch water has been sent to the Honorable Clarence Cannon, chairman of the Appropriations Committee in the House of Representatives. Mr. Frank C. Brunneman, the county agent for Cameron County, had this analysis made, which he certifies is true and correct. This certified copy shows that among other detrimental minerals, this drain-ditch water contains 1,368 parts per million soluble salts such as common table and epsom salts. This means that with one irrigation of 1 acre with 5 inches of water (5 inches over the entire acre), the farmer is placing 1,368 pounds of harmful salts on each and every acre he irrigates of his valuable farmland. This practice if continued over a period of time will make this land worthless for farming practices as it will be too salty to grow crops. To alleviate this problem the directors try to see that this brackish water is mixed with riverwater whenever possible. Water from the Rio Grande River has a much better quality to it than this Tio Cano drain-ditch water. Through the years this condition will become worse rather than better due to continued irrigation in the area. Mr. Joe Kilgore, our Representative in the House of Representatives, also looked over this deplorable situation in November 1959, and will advise you this situation should be corrected.

4. Over 40 percent of our district's canals are already either brick lined and wire reinforced plus a coating of gunite concrete or has underground pipelines which can continue to render reasonably good service for years yet. The contract calls for the probability of tearing out all the improvements and replacing them with canals made of poured concrete with no reinforcement and only 2½ inches thick. This we feel is a major error as down here in this area in the summer time on the hottest days our concrete highways constructed of some 6 inches of concrete plus being well reinforced with steel rods will occasionally buckle up at various points due to the concrete expanding because of the excessive heat. How the Bureau expects 2½ inches of nonreinforced concrete to last more than a few months without getting many cracks in it is beyond us, and yet the Bureau

expects these canals to last until the project is paid out in the year 2000. This specification can be found on page 53 of the above-mentioned document No. 128 in paragraph headed "Laterals."

5. The present contract calls for some 15 miles of presently unlined canals to be constructed as buried concrete pipelines 18 inches or less in diameter. This is also a grave error as they will be too small to efficiently serve the acreage they are supposed to. An adjoining irrigation district made this same mistake some years ago much to their sorrow. This specification is also found on page 53 under the heading "Laterals."

6. The Reclamation Bureau, in making their study of the needs in the La Feria District, estimates that by using our present canal system which is over 40 percent either lined or piped, we will have adequate water supplies from 81 to 94 percent of the time. This very costly rehabilitation program of the Bureau is supposed to furnish adequate water supplies from 89 to 105 percent of the time, which means that this district will spend $6 million for something less than 10 percent more water. This information is found on page 47 of Document 128.

7. The present bonded indebtedness of the La Feria Water District is approximately $200,000. Some years ago this district had to default on an indebtedness of just over $1 million and the Reconstruction Finance Corporation had to come in. They took over the indebtedness at approximately 40 cents on the dollar. The assessed valuation of the district at present is $3,600,000 and the actual value is only some $8 million. The La Feria Water District, saddled with such an unworthy and expensive project as this by no stretch of the imagination will be able to pay back this staggering debt without many farms being sold for taxes.

8. Few people realize that our average rainfall here in this area is some 26 inches annually for the past 50 years as recorded by the U.S. Weather Bureau office located in the lower part of this county. This means that we only need water to supplement our rainfall. We are not an arid region as are many areas in the Western States. This information is found on page 14 of Document 128.

9. Some years ago the Southern Pacific Railroad extended one of their main lines through the Wilson Tract and Santa Rosa areas and built fine depots and numerous packing sheds in these new towns. They believed there was a great future in this area for them. They did do well for a few years, but the growing of vegetables and citrus fruit has been largely discontinued in this area and as a result the depot and all packing sheds have been torn down and even allspur tracks removed in the settlement of Wilson tract and the situation in Santa Rosa is not much better. There are now only two packing sheds operating in Santa Rosa and in years past there were some 10 packing sheds in operation. Many vegetables formerly grown here are now produced in the Western States and Florida. Our main crops now are cotton (with small allotments), grain sorghum, with some vegetables and citrus fruits.

10. At this time we have finally got the directors of the La Feria Water Board busy, as well as the employees, and they are having our drains cleaned out by machinery, our canals repaired where necessary, and plans are being made to increase the length of our drainage system. All this is being done with money on hand. In other words, we are beginning to get our district in a better condition without borrowing $6 million from the Federal Government. Further, our irrigation district is delivering water to the farms as it is ordered, and while some areas do need further attention and correction, the project is not going to correct these problems.

The above 10 reasons we feel are the most important reasons for our earnest request that no money be appropriated for this poorly planned Government project. We sent two representatives from our taxpayers' committee to the House and Senate committee hearings to protest the authorization of this project back in August of 1959. At that time some of the worst features were not explained too well to the committee in the House and Senate, and while various members were not impressed with the project and could see its faults, they finally decided to authorize the project in committee and let the Appropriations Committee go over it with a fine tooth comb.

Again we say this is one project that you and your levelheaded committee members should turn down and hope that a more worthwhile and a better planned one can be brought up at some future time.

Yours truly,

MURRAY A. GODFREY,
Chairman of the Taxpayers' Committee of the
La Feria Water Control & Improvement District No. 3.

AUTHORIZING ACT PROVISION

Chairman HAYDEN. Please comment on the provision in the authorizing act regarding the land ownerships in excess of 160 acres.

Mr. DOMINY. Assistant Commissioner Palmer will comment on that.

Mr. PALMER. This opposition has existed during the organization of the project. It was heard completely during hearings in Texas on the organization of the project. It has been given full weight. They were heard at the time the authorization bill was before the two committees of Congress. It is largely a small dissatisfied minority rather than a majority of the water users on the project.

OPPOSITION OF LANDOWNERS

Chairman HAYDEN. My recollection was that there was some opposition from some landowners who don't want to cut their acreage down to 160 acres.

Mr. PALMER. A very small vocal minority. They were successful at one time in carrying the opposition to the point that the repayment contract, when first voted, was voted down. In a subsequent election the contract carried by substantial majority.

Mr. DOMINY. The legislation that authorized the La Feria Division of the Lower Rio Grande rehabilitation project provides in lieu of the regular excess land provisions of the reclamation law for the payment of interest by the owners of excess land similar to the requirement of section 5(c)(2) of the Small Reclamation Project Act of 1956. The number of farm owners and size of holdings based on records of irrigation assessments in the La Feria District indicates that 1,857 owners hold 29,888 acres in units ranging in size from less than an acre up to 160 acres. An additional 11 owners holding a total of 2,282 acres in units ranging from 161 acres upward. The majority of these large ownerships fall within the category of 161 to 320 acres with only one comprising a total of 361 acres being in excess thereof.

Now, any man and wife can own and operate up to 320 acres within the excess land provisions without paying any penalty interest. So we can't believe there are more than one or two people actually involved in paying interest payments if this land ownership survey which we had at the time of authorization is accurate, and I feel it is.

Senator ELLENDER. What is the difference between this program and the one we have just been talking about? I notice that the total Federal obligation is about what the irrigator is going to pay. No navigation, no flood control. Is this another lake bottom?

Mr. DOMINY. This is another irrigation project without benefits other than irrigation.

LAND VALUATION

Senator ELLENDER. How much is that land worth now?

Mr. DOMINY. This is very excellent river bottom land.

Senator ELLENDER. What is it worth now, before you do anything?

Mr. DOMINY. I have explained that this is an existing project built by private capital and they have been operating on their own for a long period of time, but they are badly in need of drainage and rehabilitation and they came in for a special project loan and it was authorized similar to the Small Project Act except that it is a little over the limitations of the Small Project Act. So this land I would estimate that you would find great difficulty buying land there now at less than $1,000 an acre on those irrigated farms.

Senator ELLENDER. Here we are investing at the rate of $216 per acre.

Mr. DOMINY. That is right.

Senator ELLENDER. We are investing this money for the benefit of the owners of that land and this $216 per acre will be repaid to the Government over a period of, what, 35 years? At no interest. What a bonanza.

Mr. DOMINY. That is right, sir.

Senator ELLENDER. The Federal Government, of course, will benefit indirectly from this work, but it strikes me that we are going far afield of providing Federal funds to the tune of almost $6 million, by rehabilitating a project that has been in operation for many, many years, on a basis of no interest return.

Mr. DOMINY. The project has a benefit-cost ratio of 3.9 to 1. It fully meets the criteria as to project formulation consistent with the Small Project Act.

Senator ELLENDER. You have just stretched the point in my humble judgment. That is what you have done. I do not think it was ever intended for the Federal Government to go over and rehabilitate existing projects. Not by any means. And I am going to look into it a little further.

Mr. DOMINY. I think you will find that the debate on the Small Project Act certainly did contemplate that. Now, this one is just a little beyond the limits of the Small Project Act.

Senator ELLENDER. I take the position that there is justification for irrigation projects to some extent where navigation and flood control are concerned. But where none of those objectives are concerned, it is wrong for us to go there and simply rehabilitate a project that has been in existence for many years at Federal Government expense to be repayable without interest. It was never intended.

Chairman HAYDEN. If there are no further questions, I will take up the Mercedes Division, lower Rio Grande rehabilitation project in Texas.

MERCEDES DIVISION, LOWER RIO GRANDE REHABILITATION PROJECT, TEXAS

Chairman HAYDEN. The budget program includes $2,500,000 for the continuation of construction of the Mercedes Division of the lower Rio Grande rehabilitation project in Texas.

The justifications will be included in the record.

(The justifications referred to follow:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Rio Grande and Gulf Basin, Lower Rio Grande Valley, Texas in Hidalgo and Cameron Counties

AUTHORIZATION Act of April 7, 1958 (71 Stat. 372) | B/C RATIO 15.80 3/ Date July 1959

LAND CERTIFICATION By Secretary, April 28, 1959 | DEFINITE PLAN REPORT Approved by Commissioner August 26, 1959

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 10,760,000	Appropriations to June 30, 1959	$ 459,000
Net Property and Other Transfers	40,000	Appropriations for F. Y. 1960	1,394,250
Cash Advances--Non-Federal		Appropriations to Date	1,844,250
Adjustment		Initial Underfinancing F. Y. 1960	68,250
		Appropriations Required for F. Y. 19 61	2,500,000
Total to be Allocated	$ 10,800,000	Balance to Complete after F.Y. 19 61	$ 6,347,500

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$ 10,800,000	Amount Repaid by Irrigators 1/	10,800,000	Irrig. Invest. per Acre $ 159	Payment Capacity per Acre $ 8.13
Power		Amount Repaid by Power		Repayment of Investment per acre:	Annual Charges:
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators $ 159	O. & M. $ 2/
Flood & Nav.				By Power Revenues	Construction 4.54
		Non - Reimbursable		By M.& I.Water Users	
Total	$ 10,800,000	Total	$ 10,800,000		Total $ 4.54

STATUS OF REPAYMENT CONTRACT: Contract with Hidalgo and Cameron Counties Water Control and Improvement District No. 9 for $10,800,000 executed on July 18, 1958, and validated Dec. 16, 1958.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Storage Basin and River Pumping Plant	4,500 A.F / 750 Cfs	35	10-63	Permanent Operating Facilities		9	12-63
Main Canal	13.5 mi.	1	9-63				
Laterals & Relift Pumping Plants	68,000 Ac.	4	12-63				
Drains	90,000 Ac.	1	12-63				

Acreage Full Supply 68,000 Supplemental Supply .... Total Acres 68,000 Power kw ...

Region	Date	Project and State
5	1-18-60	Lower Rio Grande Rehabilitation Project, Mercedes Division, Texas

BR-196

[1] 35-year repayment period.
[2] The rehabilitation work will result in a saving in current O. & M. costs.
[3] Change in benefit-cost ratio:
Fiscal year 1960 justification 6.53
Fiscal year 1961 justification 15.80
The benefit-cost ratio shown in the fiscal year 1960 justifications was based on the use of total benefits during a 100-year period of analysis. The data were as presented in the legislative history (H. Doc. 152, 85th Cong., 1st sess.) since the definite plan report had not been approved by the Commissioner of Reclamation. Revised benefit-cost studies prepared for the definite plan report, and reflected in the fiscal year 1961 justifications, make use of irrigation benefits on a price base of 250 for prices received and 265 for prices paid (1910–14 equal 100) whereas House Document 152 studies used a price base of 215.
Revised agricultural studies on the new price base and completion of detailed land classification resulted in a decrease in payment capacity.

Agricultural production, present and future

The major crops presently being produced are citrus, cotton, grains, and vegetables. Little difficulty is experienced in this area in obtaining two or more crops each year on the general cropland. Future cropping patterns show an increase in the production of citrus, grains, and vegetables.

JUSTIFICATION

Description.—This division of the project is in the lower Rio Grande Valley, Tex. Its purpose is to provide a full water supply for the irrigation of 68,000 acres through complete rehabilitation of deteriorated facilities.
Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Storage basin and river pumping plant, $33,000.—For completion of the installation of three natural gas engines replacing three steam driven engines in the river pumping plant.
Laterals and relift pumping plants, $2,468,000.—The program provides for the award of four construction contracts, completion of two construction contracts, and continuation of two construction contracts and a concrete pipe contract, all in connection with rehabilitation of laterals. Rehabilitation of laterals consists of reconstruction of all earth laterals with concrete lining or pipelines, repair or replacement of structures, and providing maintenance roads along all new lined laterals. The program also provides for completion of necessary re-

pair and replacement work in connection with relift pumping plant No. 5. Preconstruction work on laterals will be continued to insure an orderly sequence of construction so as to cause as little interference as possible with irrigation in this area where water deliveries are required practically the entire year.

Drains, $5,000.—For the continuation of collection of design data.

Service facilities, depreciation, and salvage, —$6,000.—Represents $8,000 cost of service facilities procured in prior years which will be distributed to permanent property in fiscal year 1961 partially offset by $2,000 for procurement of additional service facilities.

Change in total obligations

	Obligations
1960 congressional justification	$10,760,000
1961 congressional justification	10,760,000
No change	

STATUS OF PROJECT

Chairman HAYDEN. Any questions or comments on this project?

Mr. DOMINY. Mr. Chairman, this is going along very well. Construction is now pretty well along on this project.

Senator ELLENDER. That is another project in the same category, purely irrigation.

Mr. DOMINY. Yes, sir.

Senator ELLENDER. Is that an existing project?

Mr. DOMINY. Yes, sir.

Senator ELLENDER. Is it to be rehabilitated at Federal expense?

Mr. DOMINY. Exactly in the same category as the La Feria, and in the same general area.

SAN ANGELO PROJECT, TEXAS

Chairman HAYDEN. The budget program includes $11 million for the San Angelo project in Texas. The justifications will be included in the record.

(The justifications referred to follow:)

PP: 65
(7: 58
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Rio Grande and Gulf Basin - West Texas in Tom Green County, in the vicinity of San Angelo, Texas

AUTHORIZATION: Act of August 16, 1957 (71 Stat. 372) | B/C RATIO 2.70 | Date May 1959

LAND CERTIFICATION: March 1959 | DEFINITE PLAN REPORT Submitted February 1959

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 32,266,300	Appropriations to June 30, 1959	$ 510,000
Net Property and Other Transfers	167,700	Appropriations for F. Y. 19 60	1,657,611
Cash Advances--Non-Federal		Appropriations to Date	4,267,611
Adjustment	1/ 309,000	Initial Underfinancing F. Y. 19 60	242,389
		Appropriations Required for F. Y. 19 61	11,900,000
Total to be Allocated	$ 32,743,000	Balance to Complete after F.Y. 1961	$ 16,756,300

ALLOCATIONS 2/		REPAYMENT		AMOUNTS PER ACRE			
Irrigation	$ 10,504,000	Amount Repaid by Irrigators	$ 4,000,000	Irrig. Invest. per Acre	$ 1,050	Payment Capacity per Acre	$ 16.77
Power		Amount Repaid by Power		Repayment of Investment per acre:		Annual Charges:	
M. & I. Water 1/	6,639,000	Amount Repaid by M. & I. Water	13,493,000	By Irrigators	$ 400	O. & M.	$ 5.00
Flood & Nav 2/	11,503,000	1/ & 2/		By Power Revenues		Construction	10.00
Recreation	68,000	Non - Reimbursable	15,250,000	By M. & I. Water Users	650		
Fish & Wl.	4,029,000	Total	$ 32,743,000			Total	$ 15.00
Total	$ 32,743,000						

STATUS OF REPAYMENT CONTRACT: Repayment contract with San Angelo Water Supply Corporation executed April 28, 1959; repayment contract with Tom Green County Water Control and Improvement District No. 1 executed June 10, 1959.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Twin Buttes Dam and Reservoir	600,000AF	3	6-63				
Main Canal and Laterals		2	6-63				
Drainage System		5	6-63				
Permanent Operating Facilities		-	6-63				
Twin Buttes Recreational Development		-	6-63				

Acreage Full Supply 10,000 | Supplemental Supply | Total Acres 10,000 | Power kw

Region	Date	Project and State
5	1-18-60	San Angelo Project, Texas

BR-201

[1] Includes $309,000 interest during construction.
[2] Includes $350,000 to be paid by the San Angelo Water Supply Corp. for local flood control land enhancement benefits.
[3] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$11,058,000	$10,504,000
Municipal and industrial water	6,935,000	6,639,000
Flood control	10,803,000	11,503,000
Recreation	60,000	68,000
Fish and wildlife	3,584,000	4,029,000
Total to be allocated	32,440,000	32,743,000

All allocations are changed as the result of a complete new cost allocation study made in connection with advance planning investigations. Benefits to all purposes were changed by application of current agency criteria for project evaluation. Increase in reimbursable interest during construction results from an extended construction period and the recreation allocation increase of $8,000 represents a more detailed estimate of the required facilities.

Agricultural production present and future

Present crops are primarily cotton and grain crops. Future crops will be cotton, grain crops, alfalfa, and forage sorghum.

JUSTIFICATION

Description.—This multipurpose project is located in west Texas near the city of San Angelo. It will provide a full water supply for the irrigation of 10,000 acres, municipal and industrial water for the city of San Angelo, flood control, fish and wildlife, and recreational benefits.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Twin Buttes Dam and Reservoir, $10,596,000.—The program provides for the continuation of construction of the dam, including the procurement and installation of the high pressure gates and other equipment in the outlet works. The acquisition of land and land rights and the relocation of existing property in the dam and reservoir area will be completed.

Main canal and laterals, $399,000.—For the acquisition of land and land rights and the initiation of construction for the main canal. Land and land rights will be acquired, the collection of design data will be completed, and the construction specifications will be almost completed for the laterals.

Drainage system, $1,000.—Collection of design data will be continued.

Service facilities, depreciation, and salvage, $4,000.—Represents $15,000 cost of service facilities procured in prior years which will be distributed to permanent property in fiscal year 1961 which is more than offset by $19,000 for procurement of additional service facilities consisting of automotive, work, and laboratory equipment.

Change in total obligations

	Obligations
1960 congressional justification	$32,031,020
1961 congressional justification	32,266,300
Increase	235,280

The change is due primarily to an increase in the estimated cost of the dam and reservoir in the amount of $116,000; the adjustment of estimates of construction contracts for main canal and laterals, $90,000; and minor increases of $29,280 to conform with more detailed studies.

PROJECT COMPLETION DATE

Chairman HAYDEN. At the present rate of construction, when will this project be completed?

Mr. DOMINY. On this project we just awarded the prime contract a few weeks ago and this will continue over through fiscal 1963 with the initial water being available at the end of fiscal 1963. Storage will be initiated about January 1, of calendar 1963.

You might be interested in knowing that when we opened bids on this project, we had some 20 bids and about half of them were below the Engineers' estimate and the low bidder was 65 percent of the Engineers' estimate.

Senator ELLENDER. You must have run out of pencils when you made those estimates.

Mr. DOMINY. Well, I think it is indicative that this is a large earth-moving job and there were a number of contractors with the kind of equipment where that job worked in well and they really did want it. They did sharpen their pencils and produced some very good bids on it.

PROVO RIVER PROJECT, UTAH

Chairman HAYDEN. The budget program includes $825,000 for the Provo River project in Utah. I will put the justifications in the record.

(The justifications referred to follow:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Bonneville Basin, Central Utah, in Utah, Wasatch, Summit, and Salt Lake Counties

AUTHORIZATION Approved by the President, November 16, 1935. | B/C RATIO None--Construction initiated prior to requirement

LAND CERTIFICATION None Required | DEFINITE PLAN REPORT Deer Creek powerplant, approved by Commissioner Sept. 10, 1952.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 35,908,329	Appropriations to June 30, 1959	$ 33,951,808
Net Property and Other Transfers	405,868	Appropriations for F. Y. 1960	518,700
Cash Advances--Non-Federal	.....	Appropriations to Date	34,470,508
Adjustment	.....	Initial Underfinancing F. Y. 1960	97,500
		Appropriations Required for F. Y. 1961	825,000
Total to be Allocated	$ 36,314,197	Balance to Complete after F.Y. 1961	$ 515,321

ALLOCATIONS 3/		REPAYMENT		AMOUNTS PER ACRE			
Irrigation	$ 9,287,581	Amount Repaid by Irrigators	$ 8,768,237	Irrig. Invest. per Acre	$ 199	Payment Capacity per Acre	$ 3.09
Power	1/ 1,083,532	Amount Repaid by Power	2,245,013	Repayment of Investment per acre:		Annual Charges:	
M. & I. Water	25,812,953	Amount Repaid by M. & I. Water	25,170,816	By Irrigators	$ 188	O. & M.	$ .53
Flood & Nav.		C.C.C. Costs & Costs from Contributions	130,131	By Power Revenues	11	Construction	2.56
C.C.C. costs & costs from contributions	2/ 130,131	Non - Reimbursable		By M. & I. Water Users	-		
Total	$ 36,314,197	Total	$ 36,314,197			Total	$ 3.09

STATUS OF REPAYMENT CONTRACT: Contract executed June 27, 1936; amended February 2, 1949, with Provo River Water Users' Association for repayment of the Deer Creek division costs. Contract executed with Metropolitan Water Users' Association November 16, 1936, amended February 7, 1949; for repayment of the Aqueduct division costs. Provo River Water Users' Association and Metropolitan Water Districts executed a supplemental contract November 16, 1959 for accelerated repayment of Deer Creek division costs.

PRINCIPAL FEATURES

	Size or Cap.	Completion 1-1-60	Completion Date		Size or Cap.	Completion 1-1-60	Completion Date
Provo River Channel Revision	35 Mi.	45	6-62				
Duchesne Tunnel	6 Mi.	99	12-60				
Deer Creek Powerplant	4,950 Kw.	99	11-59				

Acreage Full Supply 0 | Supplemental Supply 46,609 | Total Acres 46,609 | Power kw 4,950

Region	Date	Project and State
4	1-18-60	Provo River Project, Utah

BR-206

1 Does not include interest during construction—not required.
2 Includes $58,334 spent from CCC funds and $71,797 contributions.
3 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$9,290,877	$9,287,581
Power	1,059,695	1,083,532
M & I water	25,833,603	25,812,953
CCC costs and contributions	58,334	130,131
Total	36,242,509	36,314,197

Change in total to be allocated results from the increase in total obligations for channel right-of-way, construction costs for Deer Creek powerplant and the addition of investigations costs on abandoned Utah Lake division. The item for contributions was previously merged with the allocations to purposes but is herein set out for clarity of presentation. Increases to Deer Creek powerplant are assigned to the power allocation. Changes in irrigation and M. & I. water are the net of increased obligations and the removal of a proportionate amount of the contributions item.

Agricultural production present and future

The crops presently grown are forage, cereals, vegetables, and truck, deciduous fruits, berries and field crops. Future crops, same.

JUSTIFICATION

Description.—This project located in central Utah is a multipurpose project which provides a supplemental water supply for 46,609 acres of land in the central section of the State of Utah, 57,500 acre-feet of municipal and industrial water and a power supply of 4,950 kilowatts. The irrigation and municipal and industrial water facilities are operated and maintained by the water users. The Deer Creek powerplant is operated and maintained by the Provo River Water Users' Association, under contract, with payment from appropriated funds.

Work proposed, fiscal year 1961

Appropriation title.—Construction and rehabilitation.

Provo River channel revision, $757,296.—The program provides for continuation of the acquisition of rights-of-way, including flood easements, along the Provo River and the construction of dikes, bank protection facilities, and channel corrections along the river.

Duchesne tunnel, $67,162.—For installation of control gates at the tunnel inlet to regulate the tunnel flows, and construction of access road to the tunnel inlet.

Consolidated expenditures and credits, $542.—Minor adjustments.

Change in total obligations

	Obligations
1960 congressional justification	$35,610,306
1961 congressional justification	35,908,329
Increase	298,023

The change in total obligations is due to adjustments to reflect final costs on completed features which increase the total $15,721, increased right-of-way acquisition cost of $45,958, and to reflect adjustment of prior year transactions totaling $236,344 which have no affect on future fund requirements.

PROJECT COMPLETION SCHEDULE

Chairman HAYDEN. I note that some $500,000 will be required after fiscal 1961 to complete the project. Just when will it be completed?

Mr. DOMINY. Well, the principal problem they have on the Provo River project is the use of the river for a channel to transport transmountain diverted water down into Deer Creek Reservoir. The only time we can bring that water over, the only time it is available to us is in the spring runoff and it frequently coincides with the heavy runoff in the Provo River. So it means that we add water on top of a pretty full stream, and we had a number of problems with landowners along the Provo River that we are attempting to work out now.

The fish and game people in the State of Utah also want us to work that out in such a way that it will enhance fishery values rather than harm the fine fishery values on this stretch of the river. So we have a program continuing through fiscal 1962 to try to clear up these problems.

WEBER BASIN PROJECT, UTAH

Chairman HAYDEN. The Weber Basin project in Utah. It has a budget program of $8,283,000. I will put the justifications into the record.

(The justifications referred to follow:)

PF: 65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Great Basin, Weber River Basin, North Central Utah, in Weber, Davis, Morgan and Summit Counties. The City of Ogden is in the project area.

AUTHORIZATION: Act of August 29, 1949 | B/C RATIO 2.8 | Date Dec. 1959

LAND CERTIFICATION: Secretary July 25, 1952 | DEFINITE PLAN REPORT Appv'd by Commissioner 7-29-52 [8]

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 95,780,000	Appropriations to June 30, 1959	$ 38,858,153
Net Property and Other Transfers	1,720,000	Appropriations for F. Y. 1960	4,251,190
Cash Advances--Non-Federal		Appropriations to Date	43,819,343
Adjustment		Initial Underfinancing F. Y. 1960	0
		Appropriations Required for F. Y. 1961	8,283,000
Total to be Allocated	$ 97,500,000	Balance to Complete after F.Y. 1961	$ 43,977,657

ALLOCATIONS [2]		REPAYMENT [2]		AMOUNTS PER ACRE			
Irrigation	$56,251,000	Amount Repaid by Irrigators	$ 24,456,600	Irrig. Invest. per Acre	$ 499	Payment Capacity [7] per Acre	$ 5.60
Power [1]		Amount Repaid by Power [6]		Repayment of Investment per acre:		Annual Charges:	
M. & I. Water	25,405,000	Amount Repaid by M. & I. Water	43,229,500	By Irrigators	$ 217	O. & M.	$ 2.00
Flood & Nav.	6,558,000	Advalorem Tax Revenue	11,555,000	By Power Revenues		Construction	3.60
Recreation	4,738,000	Sales Surplus Energy	2,417,800	By M & I Water Users	166		
Fish & Wl.	4,548,000	Non - Reimbursable	15,841,000	By Advalorem Tax	95		
Total	$97,500,000	Total	$ 97,500,000	Sales Surplus Energy	21	Total	$ 5.60

STATUS OF REPAYMENT CONTRACT: Repayment contract with Weber Basin Water Conservancy District executed on December 12, 1952. Repayment contract obligation is $57,694,000. Negotiations are under way to increase this obligation to the amount necessary to cover repayment of the increased costs.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Pineview Dam and Reservoir	110,000 A.F.	83	3/	Weber Aqueduct & Laterals	80 cfs	92	6-60
Wanship Dam and Reservoir	60,000 A.F.	89	4/	Davis Aqueduct & Laterals	355 cfs	57	5-64
Upstream Development	various	1	6-64	Layton Canal, Pump & Laterals	260 cfs	4	5-65
Willard Dam and Reservoir	215,000 A.F.	34	12-63	Warren Canal and Laterals	245 cfs	2	6-65
Lost Creek Dam & Reservoir	20,000 A.F.	2	6-66	Willard Canal and Pumps	1,150 cfs	3	6-63
East Canyon Dam & Reservoir	52,000 A.F.	2	7-67	Drains		12	5/
Slaterville Diversion Works	1,025 cfs	98	4-50	Power Facilities	5,700 KW	99	4-56
Gateway Canal & Rivers. Wks.	700 cfs	98	6-70	Nonreimbursable Facilities	—	99	4-56
				Permanent Operating Facilities		90	FY 68

Acreage Full Supply 41,990 | Supplemental Supply 70,750 | Total Acres 112,740 | Power kw 5,700 kw

Region	Date	Project and State
4	1-18-60	Weber Basin Project, Utah

BR-212

[1] Project power facilities to be used for project pumping and cost allocated accordingly.
[2] 60-year repayment period authorized.
[3] Pineview Dam completed except for settlement of claim by Ogden River Water Users' Association.
[4] Wanship Dam now completed except annual payments on water purchased, the consummation of a water exchange and power wheeling agreement with the power company, and the consummation of a contract with the Weber River Water Users' Association for the use of Echo Dam for flood control.
[5] Construction of drains may continue for 10 years or longer.
[6] Includes interest on M. & I. investment applied to repayment of irrigation costs.
[7] Exclusive of costs of nonproject facilities.
[8] Revision currently under review.
[9] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$43,692,000	$56,251,000
M. & I. water	17,130,000	25,405,000
Flood control	7,393,000	6,558,000
Recreation	3,568,000	4,738,000
Fish and wildlife	1,730,000	4,548,000
Total to be allocated	73,513,000	97,500,000

Total to be allocated has increased through a thorough revision and review of the plan of development and an updating of the cost estimates for all of the facilities in the plan. Costs were previously allocated by a combination of methods no longer considered to be most appropriate; whereas present costs have been allocated by the separable costs-remaining benefits method adopted by the Department of the Interior and other Federal water resource development agencies. No detailed explanation of specific increases or decreases can be stated practicably, although it can be generally stated that the increases to irrigation and M. & I. water while being affected by the change in method are due almost in their entirety to cost increases. Changes in other purposes are more nearly attributable to the change in method of allocation.

Agricultural production present and future

Crops presently produced are fruits, vegetables, alfalfa, and grains. Development of the project will not introduce new crops but the same crops will be produced in greater quantities.

JUSTIFICATION

Description.—This multipurpose project is located in north central Utah. It will provide a full supply of water for the irrigation of 41,990 acres, a supplemental supply for 70,750 acres, and water for municipal and industrial consumption. In addition, the project will produce a power supply of 5,700 kilowatts for project pumping, protect fish and wildlife and provide flood control and recreation benefits.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Wanship Dam and Reservoir, $493,000.—Provides for the execution of a water exchange and power wheeling agreement with the Utah Power & Light Co., major feature of which is a payment this year to the power company for depletion of the water supply to its Riverdale powerplant. The water is being diverted and used by the project. Also provides for minor water right purchases.

Upstream development, $35,000.—For investigations leading toward start of construction after fiscal year 1961 of Causey Dam and Reservoir, and the Ogden Valley Canal, to serve project lands upstream from Pineview Reservoir.

Willard Dam and Reservoir, $2,900,000.—This amount is for continued construction of the dam.

Lost Creek Dam and Reservoir, $4,000.—Represents investigations leading toward start of construction after fiscal year 1961.

East Canyon Dam and Reservoir (enlargement), $3,000.—For investigations leading toward start of construction after fiscal year 1961.

Gateway Canal and diversion works, $15,000.—For correction of minor construction deficiencies on the canal.

Davis aqueduct, laterals, and wells, $1,473,000.—Provides for the continuation of construction of the laterals, largely in the North Davis area (east of Hill Field) and the West Farmington area, and the purchase or construction of a well in the Bountiful area.

Layton Canal, pump, and laterals, $41,000.—Provides for investigations leading toward start of construction after fiscal year 1961.

Warren Canal (enlargement) and laterals, $2,000.—For investigations leading toward start of construction after fiscal year 1961.

Willard Canal and pumps, $2,932,000.—Provides for the beginning of construction of the Willard Canal and the three Willard pumping plants. Also includes purchases of right-of-way.

Drains, $40,000.—Provides for continuation of work on the project drainage system.

Recreational development, $210,000.—For continued construction of basic recreational facilities at Pineview Reservoir.

Permanent operating facilities, $50,000.—For the purchase (either new or from Government surplus) of trucks, small tractors, and miscellaneous equipment to be used by the Weber Basin Water Conservancy District in the operation and maintenance of completed aqueducts and laterals.

Service facilities, depreciation, and salvage, −$20,000.—Represents cost of service facilities procured in prior years which will be distributed to permanent property this fiscal year.

Consolidated expenditures and credits, $27,000.—For the operation and maintenance of the Gateway and Wanship powerplants prior to completion of the pumping plants, $28,000, offset by cost of stores of $1,000 procured in prior years which will be distributed to permanent property this fiscal year.

Undelivered orders, $78,000.—Represents net change in obligations for goods and services on order but not yet received.

Changes in total obligations

	Obligations
1960 congressional justification	$71,735,000
1961 congressional justification	95,780,000
Increase	24,045,000

Review of the Weber Basin project estimate which has been underway for some time and which has been the subject of discussion during the House hearings on the fiscal year 1959 budget and again at the hearings last year has now been completed. The new total project obligation estimate reflects the following increases:

$5,450,000 for the addition of upstream development of Causey Reservoir and Ogden River Canal to serve about 5,000 acres in the Huntsville area above Pineview Dam; $3,025,000 as a result of the allowance for greater capacities and other factors in connection with the construction estimates of Lost Creek and East Canyon Dams and Reservoirs; $5,387,000 to accomplish a greater length and assure a stable structure for Willard Dam; $3,822,000 for the three Willard pumping plants to allow for use of piling to correct unsatisfactory foundation conditions and other problems; $1,225,000 to allow for additional inlet structures, pumping plants, and other modifications on the Davis aqueduct; $1,191,000 for revision in the design of the Davis aqueduct lateral systems largely because of changes from laterals to pipes; $1,434,000 for a more extensive project drainage system; $1,170,000 for additional recreational facilities based on National Park Service plans; $394,000 for the additional rehabilitation work on the Layton Canal lateral system; $200,000 for additional equipment to be furnished the water users for operation and maintenance; and $747,000 for a number of miscellaneous estimate modifications.

INCREASED ESTIMATE

Chairman HAYDEN. I note that the estimate total obligations for this project have increased some $24 million. Please comment on this increase.

Mr. DOMINY. Well, first I want to assure you that this tremendous increase didn't all come about over a 1-year period. As a matter of fact, we didn't index up the cost of this project for quite a period of time, and we have also included some upstream developments which were not in the original estimate, and I will submit a detailed statement for the record that shows exactly the reasons for this increase and points it up in detail, Mr. Chairman.

(The statement referred to follows:)

WEBER BASIN PROJECT

CHANGE IN TOTAL OBLIGATIONS

Explanation of change in estimate	*Amount of change*
The Causey Reservoir and Ogden Valley Canal have been added to serve upstream development in the Huntsville area above Pineview Dam with supplemental water. Causey Reservoir will also permit greater releases of water for fish at Pineview Reservoir. The new features are a substitute in part for the Magpie Reservoir and Eden Canal which were authorized as project features, but which had not been definitely appraised or priced in previous estimates	$5, 450, 000
Planned capacity of Lost Creek Reservoir has been increased from 15,000 acre-feet to 20,000 acre-feet on the basis of more detailed topography and in line with an economic study which indicates a larger reservoir is justified	1, 760, 000
Planned capacity of East Canyon Reservoir has been increased from 45,000 acre-feet to 52,000 acre-feet to provide 3,000 acre-feet dead storage for fish benefits, to provide capacity for sediment encroachment and to increase the active capacity necesary to maintain certain water releases for downstream fishery	1, 265, 000
The original plans for the Willard Dam were changed to revise the alinement, increase the length and to change the design of the lower portion of the dam from an hydraulic fill to a rolled earth embankment. The alinement and length were changed to locate the dam entirely outside the Bear River Migratory Bird Refuge, to reduce utility relocations, and to reduce the area of agricultural lands to be inundated. The hydraulic fill was changed to rolled earth embankment due to the nature of fill material available	5, 387, 000

CHANGE IN TOTAL OBLIGATIONS—continued

Explanation of change in estimate	*Amount of change*
The Willard Gravity and Pump Canals have been combined and the location of the pump plant necessarily changed. Foundation problems at pump plants Nos. 1, 2, 3 will require that piling be used. Other design modifications on the pump plants were also required	$3, 822, 000
Changes have been made in the capacities of the Davis Aqueduct distribution trunk lines because of changes in the service areas. The Mill Creek stream inlet has been added to divert additional water acquired by the project and other structures have been redesigned	1, 225, 000
In the Davis Aqueduct lateral systems, estimates were substantially revised to reflect current price trends. In addition Ricks Creek laterals were redesigned from low pressure to high pressure pipe, the Woods Cross laterals were redesigned from open ditches to a combination of open ditch and low and high pressure pipe, and the North Davis laterals changed from a combination irrigation pipe and open ditch system to high pressure pipe	1, 191, 000
The drainage requirements have been intensively investigated and the plan modified and substantially revised to reflect current prices. Investigations revealed that the depth of permeable materials will require closer spacing of drains and an increase in total mileage of drains. The effect of these changes was partially offset by a reduction in the area requiring drains, a decrease in the planned depth of the drains, and the elimination from the plan of wells which were intended to relieve upward artesian pressure	1, 434, 000
Proposed recreational facilities were reviewed by the National Park Service, the Bureau of Sport Fisheries and Wildlife, and others. Changes and refinements have been made in view of population increases, changes in project features, and for other reasons	1, 170, 000
Design changes have been made on the Layton Canal lateral system to include rehabilitation to provide increased capacity in 1,700 feet of the Hooper Canal, six miles of the West Weber Canal, and in other smaller laterals	394, 000
O. & M. equipment to be furnished the water users has been added to the estimate	200, 000
Miscellaneous design changes, estimate revisions, and price index changes have been made on a number of project features	689, 000
Increase in total project cost	23, 987, 000
Operation of the project powerplants will be accomplished with construction funds and power marketed commercially during interim period prior to completion of irrigation facilities which will be ultimate power users. Above increased appropriation requirement offset in part by additional transfers of costs of equipment, property and other items not requiring funds	58, 000
Increase in total project obligations	24, 045, 000

NEW CHANGES IN COST ALLOCATION

Chairman HAYDEN. You say that the changes in cost allocations are based on "separable costs-remaining benefits" method of allocating costs. I wish you would submit a statement for the record explaining this method of allocating costs.

Mr. DOMINY. I would like to have Mr. Bennett comment briefly on it now, Mr. Chairman.

Mr. BENNETT. This is the method, Mr. Chairman, which we have been using on all projects with one or two exceptions ever since 1954. It is the method that was worked out jointly between the Department of Agriculture, the Bureau of the Budget, the Corps of Engineers, and the Bureau of Reclamation. And it is the standard method now employed by all Federal agencies.

(The statement referred to follows:)

DESCRIPTION OF THE SEPARABLE COSTS REMAINING BENEFITS METHOD OF COST ALLOCATION

This method of cost allocation allocates construction cost, interest during construction, operation and maintenance, and replacement costs simultaneously. The method involves four basic steps. The first step is the determination of the justifiable expenditures which sets the maximum amount that can be allocated to any function. The justifiable expenditure is the lower of the benefits or the costs of the most economical single-purpose alternate that would likely be built in the absence of the project, and that would result in the same benefit. This comparison may be made on an annual or capitalized basis.

The second step involves the determination of the separable costs for each function which is the minimum amount that can be allocated to any function. The separable cost is the cost that is traceable to the inclusion of a specific function in the multiple-purpose project. It is calculated by subtracting the cost of a project at site without the specific function from the cost of the multiple-purpose project being allocated. This process is repeated for each function involved.

The third step involved is the determination of the remaining benefit and the allocation of the remaining joint cost in proportion to the remaining benefit. The remaining benefit is the justifiable expenditure for each function less its separable costs. The remaining joint cost is the total project cost less all separable costs.

Finally, the allocation of joint costs to each function is added to the separable cost for that function to secure the total allocation.

INCREASE OVER PREVIOUS YEAR

Senator ELLENDER. Mr. Chairman, I want to ask a question here about the amount. You say the increase over what period of time was $27 million?

Mr. DOMINY. The increase over last year's, the budget we showed last year, Mr. Ellender, is $23,987,000.

Senator ELLENDER. That covers a period——

Mr. DOMINY. We hadn't really indexed this project up over a period of time as religiously as we should have, and this I discovered and asked that it be brought up to date so that we could give you the true facts.

Let me read that into the record here. I can give you the breakdown of this $23 million. The additions of upstream development——

Senator ELLENDER. In that regard, did the authorization cover that upstream development?

Mr. DOMINY. Yes. We think the authorization was inclusive enough, but we hadn't originally included some of that upstream work in the original estimate.

Senator ELLENDER. How did this original sum affect benefit-cost ratio?

Mr. DOMINY. The present benefit-cost ratio on that project is 2.8 to 1.

What did we show on that last year, Mr. Bennett?

EXPLANATION OF COSTS

While we are waiting for that, let me read the explanation of the costs into the record, Mr. Ellender.

Senator ELLENDER. You have put the whole thing in the record, have you not?

Mr. DOMINY. I think we can.

Senator ELLENDER. I think you have. You can put that in the record just to see the difference in effect on the benefit-cost ratio.

Mr. BENNETT. The ratio last year was 2.8 to 1. By some of these increased costs, you also get some increased benefits.

Mr. DOMINY. Bringing in that upstream area, for instance, increases your benefits.

Chairman HAYDEN. Well, if there are no further questions, I will go to the Greater Wenatchee division.

Senator DWORSHAK. Mr. Chairman, before you pass on to that, I was detained at two other meetings when the Commissioner discussed the north side pumping division in Idaho. Could I ask a question on that?

Is there any more land being brought under irrigation on that project? You are asking for $429,000 for next year. Now, have you inserted in the record what that will be required for?

Mr. DOMINY. Yes. That was in the printed justification which has been made a part of the record, Senator Dworshak.

Senator DWORSHAK. I note that it provided for completion of 12 wells. Does that mean that you are digging 12 new wells? Does that imply you are bringing in more land?

Mr. BENNETT. Senator, under unit B, which is the one you are concerned with, on the 12 wells there, construction already has been started. This work will be completed in fiscal year 1961 to provide water in 1962 for the last 4,000 acres of the 78,500-acre project now programed. This is a part of the job of finishing up the area. It is already under construction.

Now, there are some possibilities for additional land there, as you know.

Senator DWORSHAK. No, I don't know. I thought all of your homesteaders had been settled on the project. That is why I am intrigued by this requirement for digging more wells. I want to know whether you are going to bring in more homesteaders.

Mr. BENNETT. The wells that are in the program now were started already. They are a part of the project for the existing areas with which you are familiar. There still remains some 2,000 acres of land above that now programed that we have tentatively held in abeyance from bringing into this project until we know a little more about where that ground water level is going to stabilize. But the work that is programed in the 1961 budget is basically completion work that has already been started.

FUTURE DEVELOPMENT

Senator DWORSHAK. It doesn't provide in any way, then, for opening up 2,000 more acres for settlement?

Mr. BENNETT. Not above the basic 78,500 acres that are already in the program.

Senator DWORSHAK. If you should redetermine later that there is a possibility of providing underground water for 2,000 more acres, you will have to come in here and request funds for that development?

Mr. BENNETT. That is correct.

Senator DWORSHAK. There is one other item, Mr. Chairman, if you will permit me to ask Mr. Dominy, about the Dalton Gardens. Is there any planning currently in the Bureau——

Mr. DOMINY. Unfortunately there isn't anything in this budget for Dalton Gardens. The problem which we have encountered there hadn't become known to us in time to include it in this year's budget. We do now know that that deterioration of the untreated pipelines which we laid there has gotten to the point where it is quite critical and there is need for a full investigation of how much of that line needs to be replaced and how much of it can be protected by cathodic protective device in place, but we could use, very frankly, $25,000 to good advantage in 1961 to isolate this problem and determine what can be done about it.

Senator DWORSHAK. Why wasn't a budget request made?

Mr. DOMINY. We didn't know about this problem in time to include it in the budget.

Senator DWORSHAK. But there has developed an emergency which requires urgent attention by the Bureau?

Mr. DOMINY. Yes; and, as a matter of fact, I don't think we would need money additional to the total budget request if we could have authorization to divert some funds to this purpose.

Senator DWORSHAK. You couldn't include it in your regular investigations program?

Mr. DOMINY. It really more properly comes under the D. & M.C. item, because it would lead to construction of some remedial work and it is a project that is already built, and it would more logically come under the D. & M.C. item. If the committee would care to give us authority to divert some money for this purpose, it would be helpful.

Senator DWORSHAK. You have enough money in that fund now?

Mr. DOMINY. Yes. I think we could transfer some for this purpose.

Senator DWORSHAK. Thank you, Mr. Chairman.

GREATER WENATCHEE DIVISION, CHIEF JOSEPH DAM PROJECT, WASHINGTON

Chairman HAYDEN. The budget program includes $2 million for the greater Wenatchee division of the Chief Joseph Dam project in Washington. The justifications will be included in the record.

(The justifications referred to follow:)

PF: 68
7-30-59
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Columbia River Basin in Chelan and Douglas Counties, Washington, along the Columbia River near Wenatchee and Chelan, Washington.

AUTHORIZATION Act of May 5, 1958 | B/C RATIO 5.71 [1] | Date May, 1959

LAND CERTIFICATION November 2, 1959 | DEFINITE PLAN REPORT Approved by Commissioner 8-11-59 on condition of minor revisions.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 7,540,000	Appropriations to June 30, 1959	$
Net Property and Other Transfers	266,000	Appropriations for F. Y. 1960	418,375
Cash Advances--Non-Federal		Appropriations to Date	418,375
Adjustment [1]	478,000	Initial Underfinancing F. Y. 1960	- - -
		Appropriations Required for F. Y. 1961	2,000,000
Total to be Allocated	$ 8,284,000	Balance to Complete after F.Y. 19 61	$ 5,125,625

ALLOCATIONS

Irrigation	$ 8,194,000
Power	- - -
M. & I. Water	- - -
Flood & Nav.	- - -
Fish & Wildlife	90,000
Total	$ 8,284,000

REPAYMENT [2]

Amount Repaid by Irrigators	$ 4,470,000
Amount Repaid by Power	3,724,000
Amount Repaid by M. & I. Water	- - -
Non - Reimbursable	90,000
Total	$ 8,284,000

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 1,223	Payment Capacity per Acre	$30.05
Repayment of Investment per acre:		Annual Charges:	
By Irrigators	$ 667	O. & M.	$16.71
By Power Revenues	556	Construction	13.34
By M.& I Water Users	--	Total	$30.05

STATUS OF REPAYMENT CONTRACT: Approved by Secretary July 29,1959, and ratified by water users' September 22, 1959. Court confirmation scheduled for early in calendar year 1960.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
East Unit	4,460 Ac.						
Pumping Plant, substation & related facilities	76 Cfs.	5	10-62	Permanent Operating Facilities		3	6-62
Lift	677 Ft.						
Lateral System	35.5 Mi.	4	9-62				
Howard Flat Unit	920 Ac.	2	12-63				
Brays Landing Unit	1320 Ac.	2	4-65				

Acreage Full Supply 6,700 | Supplemental Supply - - - | Total Acres 6,700 | Power kw - - -

Region	Date	Project and State
1	1/18/60	Chief Joseph Dam Project, Greater Wenatchee Division, Washington

BR-218

[1] Funded operating costs during a 10-year development period.
[2] Based on 50-year period.
[3] Based on 60-year period of analysis and the inclusion of $626,000, allocated cost from Chief Joseph Dam project.

Agricultural production, present and future

Crops on project lands presently irrigated are hard and soft fruit (apples and cherries). These lands account for approximately 18 percent of the irrigable division area. The remaining 82 percent are nonirrigated lands used for grain crops (wheat) and light grazing. With project development, the latter lands would also be used to produce hard and soft fruit.

JUSTIFICATION

Description.—This single-purpose project will provide a full water supply for 6,700 acres of new land in the north-central section of the State of Washington.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

East unit pumping plant, substation, and related facilities, $1,511,900.—Work will continue under the construction contract for the pumping plant, discharge line, 2-million-gallon reservoir, and substation, and under a supply contract for the pumping units. Construction of distribution lines will begin and transformers purchased.

East unit lateral system, $432,000.—The program provides for the acquisition of rights-of-way, completion of final designs, and start of construction.

Howard Flat unit, $85,000.—Collection of design data will continue, preparatory to award of construction contracts after fiscal year 1961.

Brays Landing unit, $3,000.—For preliminary fieldwork.

Permanent operating facilities, $16,100.—For acquisition of right-of-way, collection of field data, and preparation of specifications for constructing the east unit caretaker's residence, and a combined office and shop building, equipment shed, and residence for the irrigation district headquarters.

Service facilities, depreciation and salvage, $5,000.—Automotive and work equipment totaling $10,000 will be procured, partly offset by costs of $5,000 distributed to project features on use basis during the year.

Consolidated expenditures and credits, —$3,000.—Represents nonappropriation transfer of office equipment and furniture from other Bureau offices and charges from Solicitor's Office, financed from appropriation to that Office.

Undelivered orders, —$50,000.—Net change in obligations for services which were on order but not delivered at the close of fiscal year 1960.

Changes in total obligations

	Obligations
Fiscal year 1960 congressional justification	[1]
Fiscal year 1961 congressional justification	$7,540,000

[1] Not included in fiscal year 1960 congressional justifications.

WORK SCHEDULE

Chairman HAYDEN. What comments have you on this project?

Mr. BENNETT. We have no particular problems, Mr. Chairman, on this project. The work proposed in fiscal year 1961 with the request for $2 million is, of course, included within the justification and we don't anticipate any particular problems here.

The repayment contract has been confirmed by the court in January of this year and work should be underway in the early fall of 1961.

Senator ELLENDER. How can you justify Federal expenditure of $1,223 per acre?

Mr. BENNETT. Senator, this particular project has a very high benefit-cost ratio, 5.71 to 1. It is the type of project which is authorized by the Congress under a specific act. This one was authorized by the act of May 5, 1958.

This is reimbursed by the irrigators, approximately 50 percent of it The remaining cost is reimbursed by power revenues from the——

Senator ELLENDER. Those power revenues ought to go toward liquidating the cost of Chief Joseph.

Mr. BENNETT. They are, sir. After the costs of the dam itself are paid out Congress said use these revenues to return a portion of this project cost.

Senator ELLENDER. But in the meantime, though, there is not any interest paid on this money.

Mr. BENNETT. That is correct.

Senator ELLENDER. Neither for the power part paid back or the irrigation.

Mr. BENNETT. Yes, sir; the power part is paid back with interest.

Senator ELLENDER. From when? From the date of construction?

Mr. BENNETT. Roughly the date of construction of the power facilities.

Senator ELLENDER. But it is not repayable, though, until the cost of the dam is paid.

Mr. BENNETT. This irrigation part is not.

Senator ELLENDER. That is what I am talking about. So that in case it takes 50 years to complete the payment of Chief Joseph Dam, then you start paying this other with accrued interest of the 50 years.

Mr. BENNETT. With no interest.

Senator ELLENDER. I am talking about the power part.

Mr. BENNETT. The power part, the power allocation itself, out of the Chief Joseph Dam, it is paid off with interest.

Senator ELLENDER. When?

Mr. BENNETT. It is about a 50-year period from the time construction is completed, over a 50-year period.

Senator ELLENDER. Then it is paid at the same time that you repay the cost of the power dam on Chief Joseph?

Mr. BENNETT. No. Immediately following repayment.

Senator ELLENDER. All right. Now, if that is true——

Mr. DOMINY. The Senator's statement is correct.

Senator ELLENDER. You have an accumulation of 50 years of interest on that part of the amount to be repaid for power.

Mr. DOMINY. That is exactly true except under reclamation law it isn't charged. Certainly by banking standards you are absolutely correct. It would be an accumulation of interest.

Senator ELLENDER. I don't see how you can justify $1,200-some-odd per acre. I just can't see it.

COLUMBIA BASIN PROJECT, WASHINGTON

Chairman HAYDEN. The budget program includes $6,100,000 for the Columbia Basin project. The justifications will be included in the record.

JUSTIFICATION

(The justifications referred to follow:)

PF-III (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Columbia Basin - In Central Washington, approximately 95 miles west of Spokane, Washington

AUTHORIZATION Rivers and Harbors Act of August 30, 1935 and subsequent Acts | B/C RATIO 4.1 | Date August 1959

LAND CERTIFICATION By Secretary, August 11, 1952 | DEFINITE PLAN REPORT Summary Planning Report was submitted in March 1952 and adopted by the Commissioner in lieu of BPR.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 924,789,560	Appropriations to June 30, 1959	$ 538,576,513
Net Property and Other Transfers	-973,000	Appropriations for F. Y. 1960	7,427,705
Cash Advances--Non-Federal	313,440	Appropriations to Date	546,004,218
Adjustment 1/	37,501,000	Initial Underfinancing F. Y. 19	
		Appropriations Required for F. Y. 19 61	6,100,000
Total to be Allocated	$ 961,631,000	Balance to Complete after F.Y. 19 61	$ 372,685,342

ALLOCATIONS 9/		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$ 765,266,000	Amount Repaid by Irrigators $		Irrig. Invest. per Acre $ 744	Payment Capacity per Acre $ 11.87
Power	192,777,000	Amount Repaid by Power 4/	958,043,000	Repayment of Investment per acre:	Annual Charges:
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators $	O. & M. $ 7.45
Flood & Nav.	2/ 3,100,000			By Power Revenues 4/	Construction 5/ 2.12
Other	3/ 488,000	Non - Reimbursable	3,588,000	By M. & I. Water Users	Drainage 6/ 1.38
Total	$ 961,631,000	Total	$ 961,631,000		Total $ 10.95

STATUS OF REPAYMENT CONTRACT: Three 1945 Repayment Contracts provide for $85 per acre construction repayment. Completion of second phase remaining project of 550,000 acres will depend upon a revised repayment arrangement providing for a greater repayment obligation. Appropriations reported hereon are within the $280,782,180 contract ceiling.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Joint facilities	9,402,000 AF	98	7/	Pasco-Burbank-Ice Harbor pumping units	10,000 AF	99	6-62
Primary irrigation works	6,800cfs	99	1966	Other Irrigation Plant Facilities		98	1970
West Canal Irrigation Area	226,000 Ac	79	1970	Special Dist. Syst for part time units	1,000 Ac	60	1970
East Low Canal Irrigation Area	131,000 Ac	84	1970	Irrig. Facilities (2nd Phase)	550,000 Ac	0	8/
Potholes Irrigation Area	111,000 Ac	83	1970	Power Facilities	1,974,000 kw	100	1955
East High Canal Irrig. Area	(Investigations)	52	6-63	Temporary Camp		60	1966

Acreage Full Supply 1,029,000 Supplemental Supply ..... Total Acres 1,029,000 Power kw 1,974,000

Region	Date	Project and State
1	1-18-60	Columbia Basin Project, Washington

BR-223

[1] Includes full cost of O. & M. financed drains, $36,366,000, and O. & M. financed additions and improvements to power and multipurpose facilities, and minor adjustments, $1,135,000.

[2] Includes tentative allocation of $2,100,000 for enlarged Esquatzel diversion canal.

[3] Represents nonreimbursable expenditures of $174,560 for spillway floodlighting—Grand Coulee Dam, and $313,440 in contributions.

[4] Repayment ceiling under existing 1945 contracts would return $40,715,000 for the 479,000 acres in phase 1. Contracts yet to be developed for the 550,000-acre second-phase development would be expected to return an appreciably larger additional sum.

[5] Represents 40-year repayment of $85 per acre per 1945 contract for the 479,000 acres in phase 1.

[6] Represents an average long-term per acre charge for drainage to be financed through annual O. & M. payments by water users. The annual per acre charge may range from no assessment to about $3 per acre depending on the drainage construction schedule and associated repayment period.

[7] All facilities are complete except the minor work of installing flashboards on Grand Coulee Dam in fiscal year 1961 and work necessary to protect the tailrace slopes and river embankments by grouting the existing riprap. The latter work will be performed at some future date when discharge patterns indicate its necessity.

[8] Dependent upon modification of existing repayment contracts and authorized rate of development.

[9] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$583,114,000	$765,266,000
Power	192,777,000	192,777,000
Flood and navigation	3,100,000	3,100,000
Other	488,000	488,000
Total to be allocated	779,479,000	961,631,000

Increase in total to be allocated and irrigation is associated with the addition of capacity and facilities for the service of lands in the east high canal area and refinements and corrections in the estimates for other specific irrigation facilities, including the full cost of necessary drainage works.

Agricultural production present and future

Dry edible beans, the small grains, alfalfa hay, sugar beets and potatoes utilized 72 percent of the area cropped and produced about 80 percent of the gross crop income in 1959. Until the project matures these five crops plus field corn will be of greatest importance. Interest in legume seed, grass seed, mint, orchard crops and vegetables continues to increase but forage crops and grain production to complement the growing livestock enterprises loom large in future land use.

JUSTIFICATION

Description.—This project is located in central Washington. It will furnish water for the irrigation of approximately 1,029,000 acres of new land and generate 1,974,000 kilowatts of electric energy. All power produced in excess of the needs of the project is delivered to the lines of the Bonneville Power Administration for marketing and distribution. Flood-control and navigation benefits are derived by regulation of the Columbia River at Grand Coulee Dam. All power facilities and the completed irrigation facilities are operated and maintained by the Bureau of Reclamation with appropriated funds. Commencing January 1, 1960, operation and maintenance of irrigation block 1 is being financed from advanced funds.

Appropriation title.—Construction and Rehabilitation.

Work proposed, fiscal year 1961

Joint facilities, $47,000.—This amount provides for the purchase of flashboards for the crest of Grand Coulee Dam.

Primary irrigation works, $30,000.—The program provides for minor deferred and supplemental construction associated with the main canal system.

West canal irrigation area, $3,378,000.—These funds will provide for the completion of construction of lateral systems to serve blocks 80 and 88, and the Frenchman Hills pumping plant (block 80). A contract for the construction of two operators' quarters in block 80 is scheduled for award late in the year. Deferred and supplemental construction, priming, and testing of newly constructed irrigation facilities, and drainage construction financed with O. & M. funds will continue.

East low canal irrigation area, $910,000.—Deferred and supplemental construction work will be continued in this area as will the O. & M. financed drainage program.

Potholes irrigation area, $2,117,000.—The program provides for purchase of rights-of-way for the Moses Lake control works, enlargement of two additional reaches of the Potholes Canal, and for the lateral distribution system for block 23. Deferred and supplemental work and drainage financed from O. & M. funds will be continued. Priming and testing will continue on newly constructed irrigation facilities and preconstruction engineering work is to be continued on the Wahluke slope.

East high canal irrigation area, $450,000.—System studies, estimates and other preconstruction engineering and investigation work in connection with the plan for development of this irrigation area will be continued.

Pasco-Burbank—Ice Harbor pumping units (Pasco-Burbank pumping units), $5,000.—Minor deferred and supplemental construction work is planned for the Pasco-Burbank units.

Other irrigation plant facilities, $5,000.—Provides for minor improvements to facilities already constructed.

Service facilities, depreciation and salvage, $—235,000.—Provides $110,000 for replacement and addition of motor vehicles and heavy equipment, offset by the distribution of $345,000 of service facilities purchased in prior years and distributed to project features, or to other activities on a use basis, or to salvage.

Other project costs, $245,000.—This amount provides for continuing the program of settler selection, ownership conformance, providing information to prospective settlers, general project development activities and the extension of the cooperative settler assistance contract with the Washington State University. It also provides for the purchase of settlement land to facilitate the establishment of farm units (amounts received from the sale of settlement land are deposited in the Treasury and are not available for reexpenditure).

Consolidated expenditures and credits, $148,000.—This amount represents the estimated collections from equipment to be salvaged which are deposited in the Treasury and not available for reexpenditure, and other minor adjustments.

Operation and maintenance financed drains, —$1,000,000.—This amount represents the deduction for drainage construction work to be financed from O. & M. funds.

Change in total obligations

	Obligations
1960 congressional justification	$785,082,000
1961 congressional justification	925,103,000
Increase	140,021,000

The major portion of the increase $126,402,000, reflects the cost of a plan of pumping plants, canals, and laterals to serve an additional 146,000 acres of high quality land in the east high canal irrigation area. A like number of acres, all submarginal, or which no longer appear feasible to irrigate have been deleted from the project plan. Most of the deleted acres were to be served from existing or still planned canal systems and have a comparatively inexpensive total cost of $7,482,000. Other changes in the total include an increase of $3,465,000 to bring the estimate in line with present prices. An increase of $11,791,000 is due to the availability of new field data and to design modifications on the system to serve the Wahluke slope lands. An increase in the cost of settlement and settler assistance totaled $2,505,000. Cost adjustments, estimates revision and minor charges added a further $3,340,000 to the total.

INCREASE IN ESTIMATED OBLIGATIONS

Chairman HAYDEN. Will you comment on the increase of some $140 million in the total estimated obligations for the project?

Mr. DOMINY. This increase is associated with part of the project that is not in construction at this point. It is associated with the addition of capacity and facilities for the service of land in the East High Canal area and refinements and corrections in the estimate for other specific irrigation facilities including the full cost of necessary drainage works.

Actually what we have done here is for years we have had about half of the project in a deferred category. Lands were withdrawn from the districts and we weren't ready nor were we planning to construct irrigation facilities in there immediately. So we hadn't been indexing that cost up to fit rising costs—rising cost trends—but now that we are finishing up pretty well the part that is ready to be included for irrigation, we thought it proper in connection with our studies to give the Congress an up-to-date picture of the total cost at today's prices if we were to go ahead and finish the million-acre project.

Senator DWORSHAK. How many acres are involved in this future development?

Mr. DOMINY. We have within the area we are going to reach now something like 480,000 acres. So it would be roughly about 600,000 acres left.

Senator DWORSHAK. You testified yesterday before this committee that you haven't been able to negotiate this new repayment contract.

Now, are you telling the committee that although you are unable to get what you consider is a satisfactory repayment contract from the water users, you propose to go ahead and bring in more land, and obviously invite more controversy? Is that correct?

Mr. DOMINY. No, sir. We certainly wouldn't do that until the repayment contract has been successfully negotiated.

Senator DWORSHAK. Wouldn't do what?

Mr. DOMINY. Bring in additional construction.

Senator DWORSHAK. Aren't you asking for money?

Mr. DOMINY. That is still within the limits of the existing contract. The existing contract has a construction limitation of $281 million and anything that is in this budget for 1961 still is within the $281 million limit in the contract.

Senator DWORSHAK. Which was the original estimated cost of the entire million acres?

Mr. DOMINY. That is right.

Senator DWORSHAK. And now you estimate at what, about $700 million?

Mr. DOMINY. Yes. About $675 million for direct irrigation charges, but by adding to this amount the allocation for multipurpose and pumping power facilities it amounts to about $765 million.

COST PER ACRE

Senator DWORSHAK. That will amount to how much per acre on this new land you propose to bring in?

Mr. DOMINY. It will average out roughly $700 an acre for the million acres.

Senator DWORSHAK. And how much does the present repayment contract provide for water users to assume?

Mr. DOMINY. The existing repayment contract provides for them to assume a $85 construction obligation plus drainage per acre that would bring it up to about $121 per acre over a 40-year period.

Senator DWORSHAK. It has been true, has it not, in the Bureau that the repayment capability of the water users has been the basis upon which repayment contracts have been negotiated?

Mr. DOMINY. Indeed it has, ever since the passage of the 1939 Reclamation Projects Act.

Senator DWORSHAK. Do you feel that $85 is the maximum capability of repayment of water users who would settle on this new land?

Mr. DOMINY. No, sir. Our studies would indicate that the contract ought to require a repayment over a 50-year period of about $133.50 above operation and maintenance, and other costs which they would have to cover in farming under irrigation.

Senator DWORSHAK. Who would pay the difference between the $133 per acre and $700?

Mr. DOMINY. That would come from the net power revenues of Grand Coulee Dam.

Senator ELLENDER. So, you see what is happening when you hear the proponents of this project say, We are repaying. The Government is going to have something to work on and we are going to be able to build new dams and other dams, when the construction of the Grand Coulee and others is completed. But here you are obligating it to the tune of, according to this sheet, $958 million. That is almost as much as the project costs.

Senator DWORSHAK. What is that figure—$900 million?

Senator ELLENDER. Total cost, $958 million. In other words, you are obligating the projects in that area that have been constructed to the tune of $958 million, almost a billion dollars, in order to provide irrigation for the farmers in that area who are going to use this new land.

Senator DWORSHAK. Well, Mr. Chairman, we haven't had such privileges in Idaho where we have——

Senator ELLENDER. No.

Senator DWORSHAK. Where we have obligated water users to repay a large proportion of the cost, I think, in the Minidoka North Side project which was mentioned a little while ago. There is some participation in power projects in Palisades.

Mr. BENNETT. Not on Minidoka.

Senator DWORSHAK. On the Minidoka, how much are these homesteaders obligated to repay the Government?

Mr. DOMINY. On the north unit they are obligated to repay the full cost.

Senator DWORSHAK. In units A and B?

Mr. DOMINY. Yes.

Senator DWORSHAK. Not a dollar of power revenues in Palisades or any other dam in the area will be utilized to help the water users on the North Side Minidoka to repay the Government for the cost of the development? Is that true?

REPAYMENT CAPABILITY

Mr. DOMINY. That is true. And within the repayment capability of that project, we think it is fully repayable by water users.

Senator DWORSHAK. What is that?

Mr. STAMM. About $14 an acre total. Construction is about $3.22 an acre annually and operation and maintenance charges about $10.68 an acre annually.

Senator DWORSHAK. What is the total amount? You mentioned $133 is the capability in the Grand Coulee.

Mr. DOMINY. It is $166 an acre, the irrigation investment on the Minidoka North Side. The water users——

Senator ELLENDER. They will be obligated to repay all of that off in 40 years.

Senator DWORSHAK. Does that mean that the land, to assume repayment——

Mr. DOMINY. You have a number of factors to consider, Senator Dworshak. In this case, the cost per acre of providing the project is much less than in the Columbia Basin. The operation and maintenance probably will be a little higher on this project than on the Columbia Basin because all of the water has to be pumped and, of course, we do pump basically on the Columbia Basin, too, but by using the Pothole Reservoir——

Senator DWORSHAK. You get a half-mill pumping rate, too. What do they pay on the North Side Minidoka?

Mr. DOMINY. Three mills.

Senator DWORSHAK. But you are telling us now that the homesteader, the raw veteran on the Minidoka North Side, has a capability of repaying $166 per acre. Was that the figure? $166?

Mr. DOMINY. That is the construction cost.

Senator DWORSHAK. But you are proposing that, whereas you have an $85——

Mr. DOMINY. We are proposing $133.50 for the Columbia Basin project.

Senator DWORSHAK. You have currently an $85 per acre obligation. The Bureau suggests in the future that that be increased to $133.50. So you don't bring it up to the $166 that you use as the basis for the Minidoka North Side.

Mr. DOMINY. No, sir.

Senator DWORSHAK. Why not?

SMALLER FARM UNITS

Mr. DOMINY. We think there are some mitigating circumstances. For one thing, farm units which we laid out on the Columbia Basin are a little smaller than——

Senator DWORSHAK. How small?

Mr. DOMINY. On the average than the ones we laid out on Minidoka north side.

Senator DWORSHAK. Are you sure they are large enough for economic operation? You have had some trouble down there haven't you?

Mr. DOMINY. We think the units on the Minidoka north side are laid out for good irrigation, economic farm operation. We have agreed that particularly in some of the early blocks on the Columbia Basin, that the units were a little on the small side, and we have been taking steps to combine some of them and try to work that out. But on the average——

Senator DWORSHAK. What are you expecting in future development to set up as the desirable acreage for 1 farm unit, 120, 160, or what?

Mr. DOMINY. Yes; probably on the average about 110 to 120 acres. Of course, it varies by land class. A larger portion of the Minidoka north side is in classes 1 and 2 than on the Columbia Basin. There is a higher percentage of the Columbia Basin project that falls in classes 3 and 4 in our land class.

Senator DWORSHAK. How many acres will there be in a farm unit?

Mr. DOMINY. It varies from a minimum on some of the units as low as 60 to 65 up to almost 160 in some of the class 3 and 4.

Senator DWORSHAK. Thank you, Mr. Chairman.

Senator ELLENDER. Mr. Chairman, may I ask a few questions? I want to go a little bit in detail about this Columbia Basin project.

I have been a very strong advocate of this development in the past. Am I to understand that you contemplate spending almost a billion dollars for the development of 1,029,000 acres?

Mr. DOMINY. The irrigation features would be constructed at an estimated cost of $675 million. However, as I pointed out earlier, this does not include the portion allocated to irrigation for multipurpose and pumping power facilities.

TOTAL POWER COSTS

Senator ELLENDER. Do you know what will be the total cost of constructing all of the power facilities in that area that will repay this irrigation project?

Mr. DOMINY. Yes. The amount of the total cost allocated to power—now, that would be the specific powerplants and switchyards and a portion of the dam—it would be $192,777,000.

Senator ELLENDER. Is that the actual cost of constructing all those dams?

Mr. DOMINY. No. This is just the Columbia Basin Dam itself, the power features of the Grand Coulee Dam.

Senator ELLENDER. That is the total cost of building Grand Coulee. Am I right?

Mr. DOMINY. That is the total cost allocated to power. Now, part of that dam would be allocated to irrigation.

Senator ELLENDER. Power. In other words, soon after the cost of the power facility is repaid, then we will obligate the revenues thereafter to the tune of $765,266,000.

Mr. DOMINY. If the project were completed to the million-acre size——

Senator ELLENDER. That is what I am talking about.

Mr. DOMINY (continuing). We would get, under the proposal which we are making to the water users, and which I fully expect ultimately to have accepted in negotiated contracts, the water users would pay approximately $135 million of the irrigation costs over a repayment period. And that would leave $630 million of the irrigation costs to be picked up from power revenues.

Senator ELLENDER. How long do you think it will take to pay that?

Mr. DOMINY. Well, Grand Coulee Powerplant is, of course, one of the very best bank accounts we have——

Senator ELLENDER. I know that.

Mr. DOMINY (continuing). In the reclamation system.

FUTURE OBLIGATION

Senator ELLENDER. But here you are mortgaging the proceeds for 50 years at least, when I thought all the time that after this was paid, the money would go to the Treasury so as to build new projects. But here we are obligating it for 50 years after you complete the payment of the initial cost.

I am glad I came here today, Mr. Chairman, because I am going to look into these things a little bit closer because I just think it is wrong to do a thing like that. Absolutely wrong. It smells, to be frank with you. I think it is silly for $193 million to be chargeable to power, and then to use $600-some-odd million of Federal money now repayable out of a facility that belongs to the Government to the people.

Mr. DOMINY. This was the basis on which this great basinwide development was undertaken, that after the power revenues first went to pay off the cost of the power with interest, that——

Senator ELLENDER. You ought to wait until that is done, then, before you obligate more Federal funds. You are going to spend here three or four times the amount of Federal funds required to construct that part of the facility chargeable to power.

REPAYMENT OF LOAN

Mr. DOMINY. As a matter of fact, the allocation to power on the Columbia Basin project will be paid out in a relatively few years.

Senator ELLENDER. How many relatively? It takes 30, 40 years, about?

Mr. DOMINY. It has been in operation——

Mr. BENNETT. When did it start?

Mr. CAMPBELL. It started actually in 1941.

Senator ELLENDER. You figure out interest at the going rate on the $600 million you are going to spend for irrigation. That charge alone would be millions of dollars. You never pay it out.

Mr. DOMINY. The power allocation of the Columbia Basin project will be paid out in 14 more years, and then the revenues will be available to start paying the irrigation costs above that which the irrigators pay.

Senator ELLENDER. If it took 33 years to pay $192 million for the power part, how long will it take to pay, with interest now, $600-some-odd million? I venture to say it will take 50 to 60 years.

Mr. DOMINY. Well, of course, as you know, the reclamation law doesn't require the irrigation cost to be repaid with interest, and we have been paying the power cost out with interest.

So the——

Senator ELLENDER. To the landowner, no. But I think it is unjust to the American people. As Senator Dworshak pointed out just now, in some cases you make the irrigators pay almost the full measure of it. You did in some projects, and here, with a cost of—let's see—how much an acre? What is the cost per acre here? Seven hundred forty-four dollars—you make them pay about $133 and the rest of it comes out of the facility that belongs to the people and paid for directly by the Federal Government.

This is going to make me sour on some of these projects. I happen to be Chairman of the Public Works Subcommittee of the Appropriation Committee. I am going to look more closely in the future at such projects. The idea of coming here and building this and saying it is going to be repaid in 25 years and then you mortgage it for another 50 years; I just think it is putrid. It is wrong.

Mr. DOMINY. Well, I certainly regret to hear you comment in that fashion.

Senator ELLENDER. It is true, is it not? You do not agree with that, do you?

Mr. DOMINY. Certainly I do.

Senator ELLENDER. I am sorry. Where do you live?

Mr. DOMINY. I was born and reared in Nebraska. I went to school in Wyoming. I have been a county agent in Wyoming. I have worked with water resource development in 17 Western States for the past 27 years.

Senator ELLENDER. If the American people knew of this, and I am going to tell them about it in some way, I do not believe they would be so willing to proceed and develop these areas at such a cost.

Now, I am for preserving and protecting our water resources, to make water work for us, but when you are tied up for years this way, I just think it is wrong.

BENEFITS FROM PROJECT

Mr. DOMINY. Well, I think, Senator, if you were to examine the costs of this project—the benefits that will flow from it—as compared to the costs of any other Federal water resource development, and I mean any other one—you cite navigation and flood control, which are nonreimbursable and which do provide benefits—and if this one will come out on all fours with any of those projects in terms of benefit to the Nation and at the same time this project is reimbursable from the features provided. To be sure, it is reimbursable without interest, but this was the very principle that was laid down in the 1902 act, that it was in the national interest to help develop the semiarid and

arid West, and we are going to bring from this area the income taxes alone from this——

Senator ELLENDER. I have heard it before.

Mr. DOMINY (continuing). Will more than cover these costs.

Senator ELLENDER. I have heard it before.

Senator DWORSHAK. Mr. Commissioner, I don't think my good colleague from Louisiana should be too rough with the Columbia Basin. If he found out that over in the Missouri River Basin they are proposing on one project to pay $1,102 per acre and in another one $1,377 per acre, he would think maybe the Columbia is doing pretty well, although it certainly should be scrutinized if we are to continue reclamation.

Senator ELLENDER. All of it ought to be closely looked into. You cannot justify such a Federal payment of $1,100 and $1,200 per acre in some of these projects repayable in 30 or 40 years without interest. You cannot justify it.

Chairman HAYDEN. The only way you can justify it is that the land is needed for the cultivation of food for an increasing population.

Senator ELLENDER. I can show you that you can reclaim land for a third—a third. What am I talking about? For 10 percent of that down in my section of the Nation. And it will be just as productive.

Senator DWORSHAK. You had better move Louisiana over into the West, the western part of our country.

Senator ELLENDER. No. We are very fortunate. We are not under the supervision of the Interior Department.

Mr. DOMINY. Off the record, we will be happy to welcome you into the reclamation area.

Senator ELLENDER. No. It would not be my desire to get into it.

DRAINAGE AND MINOR CONSTRUCTION PROGRAM

Chairman HAYDEN. The budget program includes $921,120 for the "Drainage and minor construction program."

The justifications will be included in the record.

(The justifications referred to follow:)

Summarized financial data

Allotment, fiscal year 1960	$2,821,511
Application of prior year funds	2,239,424
Balance available in subsequent years	−92,878
Initial underfinancing	639,408
Total obligations, fiscal year 1960	5,607,465
Allotment, fiscal year 1961	921,120
Prior year balance available	92,878
Balance available in subsequent years	−86,878
Total obligations, fiscal year 1961	927,120

Description.—The drainage and minor construction program consists of projects on which major construction is completed except for facilities which are temporarily deferred, and relatively small amounts of funds are being requested in the budget year for drainage work, minor repair or replacement work, miscellaneous finishing activities, preconstruction on temporarily deferred facilities, investigations for settlement of claims, and work on projects with minor programs proposed in the budget year.

Work proposed, fiscal year 1961.—The fiscal year 1961 program involves construction on six projects, investigations work on one project in the preparation for defense of pending lawsuits, review of drainage plans for the settlers assistance activity on another, and water supply and water right contract studies on another. One of these projects involving construction is scheduled for completion in the budget year. Also programed is continuation of as-built drawings and technical records.

All-American canal system, California, $6,000.—The program provides for continued review of Coachella Valley County Water District drainage plans and for postentry activity in connection with completion of the Coachella division public land settlement program.

Buffalo Rapids project, Montana, $40,000.—The program provides for continuing drainage construction on both the first and second divisions.

Michaud Flats, Idaho, $46,000.—For continued drainage construction.

Milk River project, Fresno Dam and Reservoir, Mont., $21,000.—Data collected as a part of various prior year project water supply and water right studies will be analyzed and hydrologic and other work completed with the objective of recommending remedial action.

Parker-Davis, Ariz., Calif., Nev., $325,000.—For substantial completion of rebuilding circuit breakers in the Phoenix and Mesa substations and for initial designs and issuance of specifications for a 69-kilovolt transformer for the Davis Dam 69-kilovolt switchyard.

Rio Grande, Elephant Butte power, New Mexico, $26,120.—These funds will be used to obtain engineering and technical data, for preparation of analyses, reports, charts, and exhibits and render advice and consultation and serve as witness as required by Department of Justice in defense of the *A.T. & S.F. Ry. Co.* v. *U.S.* suit and possible other suits as a result of Private Law 767, 84th Congress, approved July 14, 1956. The suits are for compensation for the taking of or for damage to real or personal property in the flooding of lands in the Rio Grande Valley near San Marcial, N. Mex., in 1929, which flooding allegedly resulted from construction of Elephant Butte Dam.

Riverton, Wyo., $204,000.—Construction work will be continued on project drains.

Shoshone, Wyo., $164,000.—The program provides for the continuation of drainage work on Heart Mountain division and completion of modification to the Buffalo Bill Dam and Reservoir.

Technical records and as-built drawings, $30,000.—The program provides for preparation of technical records of design and construction and as-built drawings for purposes of permanent records on completed works.

Yakima, Roza division, Washington, $65,000.—For completing installation of trash removal screens at Roza powerplant intake and for continued drainage construction.

Schedule of construction program, fiscal years 1960 and 1961

Program item	Estimated total	Total to June 30, 1959	Program, current year 1960	Program, budget year 1961	Balance to complete
(1)	(2)	(3)	(4)	(5)	(6)
Projects with fiscal year 1961 program:					
All-American canal system, California	$70,962,363	$64,417,433	$6,000	$6,000	$6,532,930
Buffalo Rapids, Mont	4,601,485	4,387,485		40,000	174,000
Michaud Flats, Idaho	4,670,000	3,861,653	247,927	46,000	514,420
Milk River, Fresno Dam, Mont	2,066,317	2,006,317	39,000	21,000	
Parker-Davis, Ariz., Calif., Nev	138,755,158	137,522,818	392,340	325,000	515,000
Rio Grande, Elephante Butte power, New Nexico, Texas	15,912,792	15,842,797	43,875	26,120	
Riverton, Wyo	28,713,795	22,024,340	278,455	204,000	6,207,000
Shoshone, Wyo	24,404,781	23,186,206	172,575	164,000	882,000
Technical records and as-built drawings	145,387	71,137	29,250	30,000	15,000
Yakima, Roza division, Washington	21,448,000	20,879,184	334,165	65,000	169,651
Projects inactive in fiscal year 1961:					
Buford-Trenton, N. Dak	921,491	878,697	42,794		
Cachuma, Calif	43,553,097	43,498,097	55,000		
Carlsbad, Alamogordo Dam and Reservoir, N. Mex	3,204,367	3,179,992	24,375		
Chief Joseph Dam, Foster Creek division, Washington	3,369,459	2,396,816	27,793		944,850
Colorado-Big Thompson, Colo	159,154,000	159,144,996	9,004		
Crescent Lake Dam—Claim, Oregon	1,500		1,500		
Eden, Wyo	8,202,132	7,963,808	166,121		72,203
Eklutna, Alaska	29,659,541	29,658,476	1,065		
Little Wood River, Idaho	2,120,878	1,460,432	660,446		
Palisades, Idaho, Wyoming	61,679,418	61,263,944	200,474		215,000
Rathdrum Prairie, Hayden Lake unit, Idaho	491,993	475,754	16,239		
Santa Maria, Calif	11,383,229	11,250,229	133,000		
Solano, Calif	37,864,433	36,800,644	1,063,789		
Ventura River, Calif	28,385,769	27,007,989	1,377,780		
Wapinitia-Juniper division, Oregon	537,008	477,847	59,161		
Yakima, Kennewick division, Washington	14,197,279	13,971,942	225,337		
Total obligations	716,405,672	693,629,033	5,607,465	927,120	16,242,054
Method of financing: Appropriation, fiscal year 1960			2,821,511		
Application of prior year funds			2,239,424	92,878	86,878
Balance available in subsequent years			−92,878	−86,878	
Initial underfinancing			639,408		
Appropriation required				921,120	16,155,176

Rehabilitation and Betterment of Existing Projects

Chairman Hayden. Any comments or questions?

Mr. Dominy. Nothing, Mr. Chairman.

Chairman Hayden. The budget program includes $3,609,000 for the "Rehabilitation and Betterment of Existing Projects."

The justification will be included in the record.

(The justification follows:)

Summarized financial data

Allotment, fiscal year 1960	$3,412,500	
Application of prior year funds	197,473	
Advances from non-Federal sources	8,326	
Balance available in subsequent years	−126,750	
Total obligations, fiscal year 1960		$3,491,549
Allotment, fiscal year 1961	$3,609,000	
Prior year balance available	126,750	
Total obligations, fiscal year 1961		3,735,750

Description.—On older projects which have been in operation for many years it has been found that a large number of structures have far exceeded their useful life and are requiring an excessive maintenance program to continue operations. The deteriorated facilities also often result in inefficient use or loss of irrigation water. The needed repairs are in most instances beyond the ability of the water users to finance on a current basis. In addition, there have been many changes in land use, methods of irrigation, and types of crops raised; and, to place these older projects on a basis comparable to those now being constructed, the antiquated facilities must not only be rehabilitated but also improved.

Repayment.—The act of October 7, 1949, as amended, the basic authorizing legislation for the rehabilitation and betterment program, requires execution of contracts with the irrigation districts concerned for the repayment of the total cost of the rehabilitation and betterment work prior to start of construction. The annual rate of payment by the water users is based on the finding of the Secretary of the Interior as to the ability of the water users to pay, after giving due consideration to their other outstanding repayment obligations. All projects included in the rehabilitation and betterment program have executed such repayment contracts, or, in the case of the initiation of a rehabilitation and betterment program on a project, the execution of a repayment contract is scheduled prior to the start of construction.

Status.—As a result of surveys made in 1947–48, those projects most urgently needing rehabilitation and betterment assistance were selected for initial participation in the program. Nine projects received allotments from the first year's appropriation for this work in fiscal year 1949. Additional projects have been added from year to year as repayment arrangements have been completed and funds made available. During fiscal year 1960 work will be in progress on 15 projects, of which 5 are scheduled for completion in that year.

Work proposed, fiscal year 1961

Rehabilitation and betterment work will be continued on nine projects, two of which are scheduled for completion during fiscal year 1961. In addition, a 3-year rehabilitation program is scheduled to start on the Uncompahgre project in Colorado.

Boise project, Idaho, $567,750.—Work will continue on relining and partially rebuilding 22 miles of canal, and replacing several old metal and wood flumes with concrete pipe siphons. This will complete the Boise project rehabilitation and betterment program.

North Platte project, Nebraska and Wyoming, $360,000.—The program provides for installation of 11.1 miles of concrete irrigation pipe on the lateral system, and for completion of rehabilitation of Pathfinder Dam outlet works.

Orland project, California, $75,000.—This program provides for continuation of relining of canals and laterals.

Rio Grande project, Texas, $575,000.—The program provides for completion of rehabilitation activities for Riverside diversion dam, Franklin heading, Tornillo heading, Mesilla Valley drains and general property. Rehabilitation of other canals, laterals, and drains will continue. The acquisition of construction equipment will be completed. It is planned to perform the majority of the construction work by Government forces in accordance with the Rehabilitation and Betterment Act of October 7, 1949, since the irrigation district does not have an operation and maintenance organization to perform the rehabilitation and betterment work.

Riverton project, Wyoming, $500,000.—The program provides for continuing the placement of asphaltic membrane lining in the pilot canal and laterals, and the Wyoming laterals.

Rogue River Basin project, Oregon, $200,000.—Program provides for continuing rehabilitation and betterment of the canal and distribution systems by the Medford and Rogue River Valley Irrigation Districts. The work will include replacing bridges, farm turnouts, placement of concrete lining, installing concrete pipe, and repairing canal banks.

Salt River project, Arizona, $1 million.—The program provides for lining main canals at critical locations, constructing three additional canal structures, lining laterals, replacing approximately 28 miles of open laterals with underground concrete pipelines and rehabilitating additional lateral structures.

Sun River project, Fort Shaw Division, Montana, $25,000.—Construction is scheduled to be completed on rehabilitation and betterment of canals and laterals.

Construction is to be performed under a contract with the Fort Shaw Irrigation District.

Uncompahgre project, Colorado, $209,000.—Upon the execution and validation of a repayment contract, sediment studies will be made preparatory to initiation of design work on the M. & D. headworks. Design work will proceed on the Ironstone canal headworks and work will start on replacement of two timber flumes on the CQ lateral with steel pipe. Designs and specifications will be prepared for replacement of canal lining on the South Canal and construction is scheduled to start on the rehabilitation of the East Canal, GH and GK laterals and the GHC lateral. A shop and maintenance building is scheduled for construction.

Yakima project, Tieton Division, Washington, $224,000.—To complete renewal work on flumes Nos. 2, 3 and 4, to replace flume No. 1 on lateral G, and to continue work on other flumes, siphon, and irrigation laterals.

Schedule of construction program, fiscal years 1960 and 1961

Program item	Estimated total	Total to June 30, 1959	Program, current year 1960	Program, budget year 1961	Balance to complete
(1)	(2)	(3)	(4)	(5)	(6)
Arnold, Oreg.	$43,418	$670	$42,748		
Bitter Root, Mont.	324,688	323,612	1,076		
Boise, Idaho	3,322,996	2,338,644	416,602	$567,750	
North Platte, Nebr.-Wyo.	5,728,492	3,937,242	387,451	360,000	$1,043,799
Ogden River, Utah	443,775	194,820	248,955		
Okanogan, Wash.	80,295	48,950	31,345		
Orland, Calif.	1,038,095	534,827	100,768	75,000	327,500
Owyhee, Idaho-Oreg.	492,338	458,184	34,154		
Rio Grande, Tex.	2,300,000		424,125	575,000	1,300,875
Riverton, Wyo.	4,448,355	3,132,859	408,496	500,000	407,000
Rogue River Basin, Oreg.	1,929,490	1,306,000	195,000	200,000	228,490
Salt River, Ariz.	15,978,000	8,627,959	879,308	1,000,000	5,470,733
Sun River, Fort Shaw Division, Mont.	99,935	2,857	72,078	25,000	
Uncompahgre, Colo.	725,000			209,000	516,000
Yakima, Sunnyside Division, Wash.	338,000	161,041	109,493		67,466
Yakima, Tieton Division, Wash.	507,500	6,674	139,950	224,000	136,876
Additional projects	6,500,000				6,500,000
Total Obligations	44,300,377	21,074,339	3,491,549	3,735,750	15,998,739
Method of financing:					
Appropriation, fiscal year 1960			3,412,500		
Application of prior year funds			197,473	126,750	
Advances, non-Federal			8,326		
Balance available in subsequent year			−126,750		
Appropriation required				3,609,000	15,998,739

COMMITTEE RECESS

Chairman HAYDEN. Any comments?

Mr. DOMINY. No, Mr. Chairman.

Chairman HAYDEN. It is 12 o'clock. We will let the committee stand in recess subject to the call of the Chair.

(Whereupon, at 12:01 p.m., Thursday, May 5, 1960, the committee adjourned to reconvene at the call of the Chair.)

PUBLIC WORKS APPROPRIATIONS FOR 1961

MONDAY, MAY 23, 1960

U.S. SENATE,
SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to recess, in room 1223 New Senate Office Building, Hon. Carl Hayden (chairman of the subcommittee) presiding.

Present: Chairman Hayden and Senator Young.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

STATEMENTS OF FLOYD E. DOMINY, COMMISSIONER; N. B. BENNETT, ASSISTANT COMMISSIONER FOR POWER AND GENERAL ENGINEERING; W. I. PALMER, ASSISTANT COMMISSIONER FOR IRRIGATION AND PROJECT DEVELOPMENT; A. R. GOLZE, ASSISTANT COMMISSIONER FOR ADMINISTRATION AND FOREIGN ACTIVITIES; B. G. DAVIS, CHIEF, DIVISION OF PROGRAM COORDINATION AND FINANCE; D. R. BURNETT, CHIEF, DIVISION OF PROJECT DEVELOPMENT; G. G. STAMM, CHIEF, DIVISION OF IRRIGATION AND LAND USE; D. S. CAMPBELL, CHIEF, DIVISION OF POWER; SIDNEY D. LARSON, DIRECTOR, DIVISION OF BUDGET AND FINANCE, DEPARTMENT OF INTERIOR.

MISSOURI RIVER BASIN PROJECT

Chairman HAYDEN. The committee will come to order. We will proceed with the consideration of funds for the construction of the various units of the Missouri River Basin project.

The general statements in the justifications pertaining to the Missouri River Basin project will be included in the record.

(The justification follows:)

MISSOURI RIVER BASIN PROJECT (INCLUDING FORT PECK PROJECT)—GENERAL STATEMENT

Summarized financial data

Fiscal year 1960:	
Appropriation	$38,601,043
Advances from non-Federal sources	50,000
Application of prior year funds	2,641,651
Initial underfinancing	1,179,605
Total obligation program, fiscal year 1960	42,472,299
Total program, fiscal year 1961	55,585,280

Status.—As of June 30, 1960, the Bureau will have completed construction of seven units and 17 other units and divisions, including the Fort Peck project, will be under active construction. Partial flood control has been achieved on several main tributaries and actual irrigation will be underway on 15 units. The high voltage transmission system now completed is capable of carrying to load centers the power currently available and is scheduled to be increased to meet the generating capacity of the Missouri River main stem powerplants under construction by the Corps of Engineers.

Work proposed, fiscal year 1961

The fiscal year 1961 requirements for the overall Missouri River Basin project and the Fort Peck project (which is incorporated in the program for the transmission division) are outlined in this consolidated statement. Separate justifications follow for each division or unit to be in an active construction stage in fiscal year 1961, for the Missouri River Basin investigations and advance planning to be financed with construction funds, and for the requirements of other Department of the Interior agencies participating in the basin development.

Construction programs, fiscal year 1961.—This program provides for construction on 19 divisions and units, including the Fort Peck project. Included in the fiscal year 1961 program is $3,500,000 for two new construction starts. These are Almena unit, Kansas, and Yellowtail unit, Montana and Wyoming. The continuing construction includes six units in the "Drainage and minor construction" category because of their relatively limited programs for 1961. Small amounts of funds are included in the "Drainage and minor construction" category for technical records and as-built drawings in connection with functionally completed units for which construction funds are not available. A major portion of the funds requested will be required to make contract payments for work now under construction or to be placed under construction during the fiscal year. During fiscal year 1961 irrigation service will be made available to about 16,500 acres of new land and 18,500 acres of land now inadequately served. Installed power-generating capacity will be increased by 48,000 kilowatts.

Investigations.—The fiscal year 1961 request provides for continuing investigations on seven units and divisions, completion of a basin survey in the Yellowstone division, and miscellaneous investigations in connection with basin surveys which have been completed in prior years.

Advance planning.—The advance planning program provides for collection of design data, preparation of designs and specification, completion of definite plan reports, and for negotiations with local interests leading to execution of repayment contracts. During fiscal year 1961 advance planning will be underway on eight units and divisions.

Other Interior agencies.—Allotments will be made to the six participating agencies for continuation of multipurpose development of the Missouri River Basin. While most of the funds expended are for direct benefit of the recipient agency in carrying out the Department of Interior's coordinated and comprehensive program for the development of land and water resources, some direct benefits are realized by the Bureau of Reclamation and the Corps of Engineers in the way of surveys and stream data. Activities to be continued under this heading include classification and inventory of public land by the Bureau of Land Management and evaluation of mineral resources by the Bureau of Mines.

The Fish and Wildlife Service will continue studies with the construction agencies to see that proper wildlife protective facilities are incorporated in construction plans. The Geological Survey will collect and analyze basic data on water, land, and mineral resources and prepare maps and reports reflecting these data. The National Park Service is responsible for the comprehensive plan for conservation, development, and use of outdoor recreational and historical resources, while the Bureau of Indian Affairs will be responsible for custodianship and management of the tribes residing on Indian reservations.

Details of the proposed fiscal year 1961 program are given in the statements which follow.

Missouri River Basin project program, fiscal years 1960 and 1961

Divisions, units, and locations	Estimated total obligations	Obligations to June 30, 1959	Obligation program, fiscal year 1960	Obligation program, fiscal year 1961	Balance to complete
Completed and inactive units:					
Fort Clark unit, North Dakota	$651,904	$651,904			
Heart Butte unit, North Dakota	6,419,908	4,272,908			$2,147,000
Keyhole unit, Wyoming	4,811,280	4,720,280			91,000
Kortes unit, Wyoming	14,513,653	14,513,653			
St. Francis unit, Colorado	17,428,227	13,244,942			4,183,285
Savage unit, Montana	510,098	479,369			30,729
Total	44,335,070	37,883,056			6,452,014
Construction program:					
Ainsworth unit, Nebraska	25,435,000	598,096	$136,932	$1,500,000	23,199,972
Almena unit, Kansas	15,121,000			1,000,000	14,121,000
Bostwick division, Nebraska-Kansas	51,307,176	35,791,781	2,176,320	821,000	12,518,075
Cedar Bluff unit, Kansas	18,301,020	13,870,902	333,618	1,400,000	2,696,500
East Bench unit, Montana	20,195,000		500,000	2,800,000	16,895,000
Farwell unit, Nebraska	31,682,000	603,590	3,016,410	7,700,000	20,362,000
Frenchman-Cambridge division, Nebraska	80,243,057	61,166,298	4,070,884	5,439,000	9,566,875
Glendo unit, Wyoming	44,909,628	40,971,859	2,620,531	775,280	541,958
Helena Valley unit, Montana	14,104,741	10,407,289	2,059,952	565,000	1,072,500
Owl Creek unit, Wyoming	5,377,761	3,922,686	1,000,075	455,000	
Transmission division (includes Fort Peck project), various	339,536,913	130,879,768	17,960,960	24,415,000	166,281,185
Webster unit, Kansas	18,412,042	14,095,411	2,830,187	617,000	869,444
Yellowtail unit, Montana-Wyoming	107,491,129	2,951,129	15,000	2,500,000	102,025,000
Drainage and minor construction:					
Angostura unit, South Dakota	14,518,892	14,229,741	150,151	128,000	11,000
Boysen unit, Wyoming	33,827,679	33,812,079	15,600		
Canyon Ferry unit, Montana	29,309,342	29,106,096	203,246		
Crow Creek pump unit, Montana	1,758,665	1,602,685	30,980	30,000	95,000
Dickinson unit, North Dakota	1,766,816	1,764,689	2,127		
Hanover-Bluff unit, Wyoming	3,408,034	2,650,113	261,921	197,000	299,000
Jamestown unit, North Dakota	3,919,969	3,827,699	10,270		82,000
Kirwin unit, Kansas	19,309,143	18,510,574	178,969	30,000	589,600
Lower Marias unit, Montana	65,025,918	21,197,959	97,959		43,730,000
Rapid Valley unit, South Dakota	9,086,624	7,981,721	9,903		1,095,000
Sargent unit, Nebraska	8,354,235	5,997,877	17,250	100,000	2,239,108
Shadehill unit, South Dakota	11,334,502	7,797,328	56,174	98,000	3,383,000
Technical records and as-built drawings	69,430	39,805	14,625	15,000	
Subtotal, construction [1]	973,805,716	463,777,175	37,770,044	50,585,280	421,673,217
Investigations	51,673,481	40,845,063	901,371	656,000	9,271,047
Advance planning	25,564,939	16,371,515	1,152,448	1,344,000	6,696,976
Other departmental agencies	98,058,000	50,305,643	2,648,436	3,000,000	42,103,921
Total [1]	1,149,102,136	571,299,396	42,472,299	55,585,280	479,745,161

[1] Active units only

AINSWORTH UNIT, NEBRASKA

The budget program includes $1,500,000 for the Ainsworth unit in Nebraska.

The justifications will be included in the record.

(The justification follows:)

PP-48 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Missouri River Basin--In north-central Nebraska in Cherry, Brown and Rock Counties near the confluence of the Snake and Niobrara Rivers

AUTHORIZATION: Acts of August 21, 1954 and May 18, 1956 | B/C RATIO 2.44 | Date 12/31/59

LAND CERTIFICATION: By Secretary May 21, 1957 | DEFINITE PLAN REPORT: Approved by Commissioner September 28, 1955

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 25,435,000	Appropriations to June 30, 19 59	$ 735,028
Net Property and Other Transfers	714,500	Appropriations for F. Y. 19 60	.....
Cash Advances--Non-Federal	.....	Appropriations to Date	735,028
Adjustment	1/ 274,000	Initial Underfinancing F. Y. 1960	.....
		Appropriations Required for F. Y. 19 61	1,500,000
Total to be Allocated	1/ 26,423,500	Balance to Complete after F.Y. 19 61	$ 23,199,972

ALLOCATIONS 2/		REPAYMENT		AMOUNTS PER ACRE			
Irrigation 1/	$ 25,919,700	Amount Repaid by Irrigators	$ 7,669,800	Irrig. Invest. per Acre	$ 763	Payment Capacity per Acre	$ 9.05
Power	.....	Amount Repaid by Power	1/ 18,249,900	Repayment of Investment per acre:		Annual Charges:	
M. & I. Water	.....	Amount Repaid by M. & I. Water	.....	By Irrigators	$ 226	O. & M.	$ 3.28
Flood & Nav.	.....			By Power Revenues	537	Construction	5.77
Fish & Wildlife	489,000	Non-Reimbursable	503,800	By M. & I. Water Users	.....		
Recreation	14,800						
Total 1/	$ 26,423,500	Total	1/ $ 26,423,500			Total	$ 9.05

STATUS OF REPAYMENT CONTRACT: Water service and repayment contract executed September 12, 1956 with Ainsworth Irrigation District. Validation proceedings are on appeal to the Nebraska State Supreme Court.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Merritt Dam and Reservoir	68,600 A.F.	11	6-64	Permanent Operating Facilities		4	1957
Ainsworth Canal 620 c.f.s.	22.8 Miles	4	6-66	Temporary Camp		89	6-61
Ainsworth Laterals	33,960 Acres	4	1967				
Ainsworth Drains	63.4 Miles	3	1967				
Minirun Health & Safety Facilities & F. & W.		..	1965				

Acreage Full Supply 33,960 | Supplemental Supply ..... | Total Acres 33,960 | Power kw .....

Region	Date	Project and State
7	1-15-60	Missouri River Basin Project, Ainsworth Unit, Nebraska

BR-244

[1] Includes $187,000 capitalized operation, maintenance, and replacement to be funded by operation and maintenance appropriation, and $87,000 of Missouri River Basin project interest-free power allocation.

[2] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$25,925,700	$25,919,700
Fish and wildlife	489,000	489,000
Recreation	14,800	14,800
Total to be allocated	26,429,500	26,423,500

Reduction in total to be allocated and in irrigation allocation in the amount of $6,000 results from a decrease in the suballocation of interest-free pumping power from 22 percent to 20 percent.

Agricultural production present and future

Present and future crops by percent of acreage in irrigable area are:

Crop	Present	Future
Corn	34	30
Alfalfa hay	1	32
Small grains	23	16
Sugar beets (or cash crop)	0	11
Forage and pasture	38	7
Other	4	4
Total	100	100

JUSTIFICATION

Description.—The Ainsworth unit will provide a full water supply for the irrigation of 33,960 acres of semiarid land presently dry farmed in Brown and Rock Counties in north central Nebraska. In addition to irrigation, the project facilities will provide benefits for recreation, fish and wildlife, and pollution abatement.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Merritt Dam and Reservoir, $977,000.—The program provides for the award of the contract for the dam and access road. Rights-of-way will be acquired for the damsite. Specifications will be issued for gates, outlet pipe, and related equipment.

Ainsworth canal, $400,000.—Collection of design data for the first section of the Ainsworth canal will be completed and preparation of final designs and specifications will be initiated. Collection of design data for the second and third sections will be started. Aerial survey contracts will be awarded to assist in determining canal alinement.

Ainsworth laterals, $116,000.—Collection of design data for the first three sections of laterals will be underway.

Permanent operating facilities, $5,000.—For acquisition of minor items of permanent equipment to be used by construction forces during construction of project.

Temporary camp (transa houses), $2,000.—Provides for minor repairs as required for transa housing facilities.

Service facilities, depreciation and salvage, $18,000.—Provides for the acquisition of automotive, laboratory, and miscellaneous equipment, all totaling $26,000, offset in part by distribution of $8,000 during the year to project features on a use basis.

Consolidated expenditures and credits, —$18,000.—Represents estimated cost of vehicles and minor equipment which will be transferred to the project on a nonappropriation basis and the acquisition of $2,000 in stores items, all of which will be used during construction of project facilities. Also included are charges from Solicitor's Office financed from appropriation to that Office.

Change in total obligations

	Obligations
1960 congressional justification	$25,435,000
1961 congressional justification	25,435,000
No change	----------

PENDING LITIGATION

Senator HAYDEN. As I recall no funds were provided for this unit during the current fiscal year inasmuch as there was pending litigation in the courts of Nebraska involving water rights. What is the status of this litigation?

Commissioner DOMINY. Mr. Chairman, I am happy to report to you that that litigation has finally been put to rest. The Supreme Court of Nebraska acted to support the districts' water rights, and validated the Government-district contract. That was appealed and the State supreme court just last week denied appeal, so the action is final now.

LETTER FROM SECRETARY AANDAHL

Senator HAYDEN. I will put into the record at this point a letter from Secretary Aandahl advising the committee of the favorable decisions of the Nebraska Supreme Court.

(The letter referred to follows:)

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., April 18, 1960.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations,
U.S. Senate, Washington, D.C.

DEAR SENATOR HAYDEN: You will recall that the President's proposed program for the Bureau of Reclamation for fiscal year 1961 includes a request for an appropriation of $1,500,000 for construction work on the Ainsworth unit of the Missouri River Basin project. A water service and repayment contract with the Ainsworth Irrigation District was executed September 12, 1956, but validation proceedings thereon have been on appeal to the Nebraska State Supreme Court. Problems of district organization and water rights were also before the court.

We are pleased to advise you word has just been received that the Nebraska State Supreme Court has made a decision upholding the validity of the contract with the Ainsworth Irrigation District. The decision also upholds the findings of the Nebraska State Department of Water Resources which had previously approved the water right for the project.

The decision of the court was unanimous. A period of 20 days from April 8 is allowed in which to petition for rehearing, and if such petition is filed we will advise you.

Sincerely yours,

FRED G. AANDAHL,
Assistant Secretary of the Interior.

PROVISION OF LAW

Chairman HAYDEN. Senator Hruska has brought to the attention of the committee the fact that under existing law in Nebraska construction must be started in 6 months to perfect the favorable decision on water rights. Are you familiar with this requirement?

Commissioner DOMINY. Yes, sir.

Chairman HAYDEN. You are going to do it?

Commissioner DOMINY. Yes, sir. With this money in the budget we will be able to live within those limitations, we believe.

ALMENA UNIT, KANSAS

Chairman HAYDEN. The budget program includes $1 million for the initiation of construction of the Almena unit in Kansas. The justifications will be included in the record.

(The justification follows:)

WP-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin--In north central Kansas in Norton County along Prairie Dog Creek near Almena, Kansas

AUTHORIZATION Flood Control Acts of 1944 and 1946 | B/C RATIO 1.03 3/ | Date Dec. 1958

LAND CERTIFICATION Scheduled for September 1960 | DEFINITE PLAN REPORT Approved by Commissioner November 4, 1957

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 15,121,000	Appropriations to June 30, 19 59	$
Net Property and Other Transfers	299,000	Appropriations for F. Y. 19 60	
Cash Advances--Non-Federal		Appropriations to Date	
Adjustment	39,000 1/	Initial Underfinancing F. Y. 1960	
		Appropriations Required for F. Y. 1961	1,000,000
Total to be Allocated	$ 15,459,000 2/	Balance to Complete after F.Y. 19 61	$ 14,121,000

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$5,898,000	Amount Repaid by Irrigators	$ 864,300	Irrig. Invest. per Acre	$ 1,102
Power	None	Amount Repaid by Power	5,052,700 2/	Repayment of Investment per acre:	
M. & I. Water	365,000 2/	Amount Repaid by M. & I. Water	365,000 2/	By Irrigators	$ 162
Flood & Nav.	8,468,000			By Power Revenues	940
Recreation	19,000			By M.& I Water Users	None
F&WL	709,000	Non - Reimbursable	9,177,000		
Total	$15,459,000	Total	$15,459,000		

AMOUNTS PER ACRE	
Payment Capacity per Acre	$ 8.54
Annual Charges:	
O. & M.	$ 4.10
Construction	4.20
Total	$ 8.30

STATUS OF REPAYMENT CONTRACT: Almena Irrigation District No. 5 contract executed March 7, 1958, and validated November 20, 1958. Norton Kansas municipal water contract executed March 7, 1958, validation not required.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Norton Dam and Reservoir	136,700 A.F.	0	9-64				
Almena Diversion Dam	17.0' x 170'	0	3-64				
Almena System--Canals, Laterals and Drains	5,350 ac.	0	12-64 4/				
Permanent Operating Facilities		0	6-64				

Acreage Full Supply 5,350 | Supplemental Supply None | Total Acres 5,350 | Power kw None

Region	Date	Project and State
7	1-18-60	Missouri River Basin--Almena Unit, Kansas

BR-248

1 Represents $23,000 capitalized O.M. & R. to be financed with O. & M. appropriation and $16,000 interest during construction for municipal water.
2 Includes $16,000 interest during construction for municipal water.
3 Planning funds only.
4 Essentially complete except for drains.

Agricultural production present and future

Principal crops are small grains, row-crop grains, and some forage crops.

JUSTIFICATION

Appropriation title.—Construction and Rehabilitation.

Description.—The Almena unit consists of the Norton Dam and Reservoir, located on Prairie Dog Creek in Norton County, Kans., and the irrigation distribution system necessary to serve 5,350 acres of land in Norton and Phillips Counties, Kans. The dam will also furnish municipal water for the city of Norton. Fish and wildlife propagation and recreational opportunity will also be afforded. Norton Dam and Reservoir will provide flood control for several municipalities and the rural areas of the Prairie Dog Creek Valley and will provide additional protection to areas farther downstream on the Republican and Kansas Rivers. The total storage capacity of the reservoir will be 136,700 acre-feet. The rolled earthfilled dam will have a crest length of 6,360 feet and a height above streambed of 100 feet. The Almena diversion dam 2 miles west of Almena, Kans., together with 27.6 miles of canal and 16.2 miles of laterals will serve lands on both sides of Prairie Dog Creek. A system of collector drains for the disposition of excess surface runoff and irrigation waste is also planned.

Work proposed, fiscal year 1961

Norton Dam and Reservoir, $944,000.—For collection of design data, for design and issuance of specifications, and for award of construction contract for Norton Dam; negotiation and award of contract for the relocation of U.S. Highway No. 383; negotiation and award of contract for the relocation of the Chicago, Rock Island & Pacific Railroad; and for the purchase of rights-of-way for the damsite and the highway and railroad relocations.

Alemena diversion dam $15,000.—For the collection of field data.

Almena system—Canals, laterals and drains, $46,000.—For the collection of field data for the Almena canals and laterals.

Consolidated expenditures and credits, —$5,000.—Represents charges from the Solicitor's Office financed from appropriations to that office and $1,000 for the acquisition of stores items which will be distributed to project facilities during the year.

Changes in total obligations

	Obligations
1960 congressional justification	([1])
1961 congressional justification	$15,121,000

[1] Not included in fiscal year 1960 congressional justifications.

DESCRIPTION OF UNIT

Chairman HAYDEN. Would you describe this unit for the committee?

Commissioner DOMINY. The Almena unit, Mr. Chairman, consists of Norton Dam and Reservoir along Prairie Dog Creek in Kansas.

The irrigation distribution system would be built to serve about 5,350 acres of land in Norton and Phillips County, Kans. This unit, with the dam and reservoir, would also supply municipal water for the city of Norton.

Of course, it is a multiple-purpose project and there would be fish and wild life and recreational opportunities afforded as well.

ALMENA UNIT TOTAL COST

Chairman HAYDEN. What is the total estimated cost of the unit?

Commissioner Dominy. The Norton Dam and Reservoir with the distribution system and other facilities that would be required total $15,121,000.

Chairman HAYDEN. I note that a total of $5,898,000 is allocated to irrigation of which only $864,300 will be repaid by the water users; and that of a total investment of $1,102 per acre the water users will pay $162 and power revenues will be used to repay the balance of $950. How does this compare with other units in the Missouri River Basin?

Commissioner DOMINY. The total cost per acre in providing irrigation is a little higher than most of the other Missouri River Basin units. The average return by the water users in proportion to the cost is about in line with what the other irrigators are paying. In other words, the burden to power is proportional here as to what it is on most other units.

ALMENA REPAYMENT

Chairman HAYDEN. Just how do you determine how much the water users will repay and how much will be repaid from power revenues?

Commissioner DOMINY. We determine that strictly on a measure of the repaymentability of the water users on the lands to be irrigated, taking into account their present production under dry land conditions, and measuring the increased production that would result from irrigation with due regard for land classification, the size of farms, and all of the other aspects proper to consider.

I can assure the committee that our standards here have been applied exactly as we apply them in establishing repaymentability of any other project in the West.

Chairman HAYDEN. You use the same standard everywhere.

BENEFIT-COST RATIO

Commissioner DOMINY. Yes, sir. The benefit-cost ratio here is favorable. We believe that this is the kind of unit that was visualized by the Congress in the 1944 Flood Control Act, even though it is expensive and the water users pay a relatively modest portion of the irrigation allocation and the rest is paid from the net power revenues created by this multiple-purpose basin development. This unit will, along with all the others, add to the economic stability of this particular basin area.

Chairman HAYDEN. Of course the irrigation of lands in this area serves to round out the general economy of the area. As more lands are brought under irrigation, the less disastrous the periodic droughts will be, and time has taught us that we will have those droughts.

Commissioner DOMINY. The chairman is absolutely right, and these are among the various arguments placed on the record at the time Congress considered and acted favorably on the 1944 Flood Control Act.

STATUS OF REPAYMENT CONTRACTS

Chairman HAYDEN. Do you have your repayment contracts?

Commissioner DOMINY. We have the repayment contract executed both with the Almena unit, Almena Irrigation District, and the town of Norton, Kans., so we are ready to go just as soon as the funds are made available.

BOSTWICK DIVISION, NEBRASKA-KANSAS

Chairman HAYDEN. The budget program includes $821,000 for the Bostwick division in Nebraska and Kansas. The justifications will be included in the record.

(The justification follows:)

PF-65 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Missouri River Basin - In Harlan, Franklin, Webster and Nuckolls Counties in Nebraska and in Jewell, Republic and Cloud Counties in Kansas. The general location is in south central Nebraska and north central Kansas

AUTHORIZATION: Flood Control Acts of December 22, 1944 and 1946 | B/C RATIO 2.01 | Date Dec. 1958

LAND CERTIFICATION: By Secretary 4-21-53, 2-1-54, 9-8-54, 5-14-55 and 1-17-58 | DEFINITE PLAN REPORT: Suppl. approved July 3, 1956 Scandia System D.P.R. Schedules to be submitted 1962

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 51,283,176	Appropriations to June 30, 19 59	$ 35,796,176
Net Property and Other Transfers	378,478	Appropriations for F. Y. 19 60	2,147,925
Cash Advances--Non-Federal	24,000	Appropriations to Date	37,944,101
Adjustment	45,451,074 1/	Initial Underfinancing F. Y. 1960	
		Appropriations Required for F. Y. 19 61	821,000
Total to be Allocated	$ 97,136,728	Balance to Complete after F.Y. 19 61	$ 12,518,075

ALLOCATIONS 3/

Irrigation	$ 59,599,728
Power	None
Conservation M. & I. Water	24,000
Flood & Nav.	36,772,200
Recreation	78,800
Fish&Wildlife	662,000
Total	$ 97,136,728

REPAYMENT

Amount Repaid by Irrigators	$ 15,844,040
Amount Repaid by Power	43,810,488
Amount Repaid by M. & I. Water	None
Contributions 2/	24,000
Non - Reimbursable	37,458,200
Total	$ 97,136,728

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 691	Payment Capacity per Acre	$ 9.07
Repayment of Investment per acre:		Annual Charges:	
By Irrigators	$ 184	O. & M.	$ 3.81
By Power Revenues	507	Construction	4.62
By M.& I. Water Users			
		Total	$ 8.43

STATUS OF REPAYMENT CONTRACT: Nebraska-Bostwick Irrigation District contract amended November 10, 1954. Kansas-Bostwick Irrigation District No. 2 contract amended April 24, 1957.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Irrigation Facilities -				Courtland System	49,000 ac.	67	1969
Completed	16,300 ac.	100		Scandia System	13,000 ac.	4	1969
Lovewell Dam and Reservoir	92,200 A.F.	99	4-60	Permanent Operating Facilities		76	5-67
Nebraska-Bostwick Floodway Channels and Drains and Minor Canal and Lateral Construction	7,940 ac.	55	1969	Temporary Camp		100	-

Acreage Full Supply 86,240 Supplemental Supply None Total Acres 86,240 Power kw None

Region	Date	Project and State
7	1-13-60	Missouri River Basin - Bostwick Division, Nebraska-Kansas

BR-252

[1] Represents prorated share of Harlan Dam as follows: Irrigation, $11,274,000; flood control, $34,002,200; and recreation, $23,800. Also includes $151,074 capitalized operation and maintenance to be financed with O. & M. funds.

[2] Non-Federal cash advances not allocable or repayable by project users.

[3] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$59,641,528	$59,599,728
Flood control	36,772,400	36,772,200
Recreation	60,800	78,800
Fish and wildlife	662,000	662,000
Contributions		24,000
Total to be allocated	97,136,728	97,136,728

The change in the allocation to irrigation is attributed to a contribution of $24,000 by the Kansas Highway Department toward the construction of siphons across public roads and a decrease in the estimate for specific irrigation facilities. The allocation to recreation is increased as a result of a need for additional facilities at Lovewell Reservoir.

Agricultural production present and future

Principal crops prior to irrigation were small and row-crop grains with forage crops. With irrigation, there has been a decline in small grains, with an increase in row-crop grains and forage crops.

JUSTIFICATION

Description.—This division is located in south central Nebraska and north central Kansas. The primary function of this multipurpose division is to utilize the storage made by Harlan County and Lovewell Reservoirs for irrigating 86,240 acres of land. In addition to irrigation, the division also provides flood control benefits, recreational facilities, and fish and wildlife habitat conservation.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Nebraska-Bostwick Floodway channels and drains and minor canal and lateral construction, $204,247.—For the collection of field data, preparation of de-

signs and specifications, and the construction of floodway channels in the Franklin, Superior, and Courtland-Nebraska systems. Also to construct irrigation service to flood protected lands adjacent to floodway channels.

Courtland system—Canals, laterals, pump systems, electric service lines, drains, and floodway channels, $648,753.—To complete construction of White Rock extension canal and laterals and pump system No. 1, including electric service lines. To prepare designs and specifications and initiate construction of pump system No. 2, and a portion of the Courtland unit drains.

Service facilities, depreciation and salvage, —$1,000.—The cost of automotive, work, and laboratory equipment will be $2,000, which is more than offset by $3,000 of prior costs to be charged to permanent property.

Other project costs, $19,000.—For settlers assistance program.

Undelivered orders, —$50,000.—Represents distribution to permanent facilities of cost of work contracted for in prior years.

Change in total obligations

	Obligations
1960 congressional justification	$51,349,360
1961 congressional justification	51,307,176
Decrease	42,184

Decrease due to minor adjustments in the estimates for equipment transfers and operation and maintenance during construction.

CONSTRUCTION PROGRESS

Chairman HAYDEN. Do you have any questions or comments on this?

Commissioner DOMINY. No, Mr. Chairman. This unit is well along in construction and I think is proceeding satisfactorily.

CEDAR BLUFF UNIT, KANSAS

Chairman HAYDEN. The budget program includes $1,400,000 for the Cedar Bluff unit in Kansas. The justifications will be included in the record.

(The justification follows:)

PP: 60
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin - west central Kansas in Trego and Ellis Counties along the north side of the Smoky Hill River.

AUTHORIZATION Flood Control Acts of 1944 and 1946 | B/C RATIO 2.04 | Date March 1958

LAND CERTIFICATION Scheduled for February 1960 | DEFINITE PLAN REPORT Approved February 5, 1959

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 18,301,020	Appropriations to June 30, 19 59	$ 13,873,020 2/
Net Property and Other Transfers	12,587	Appropriations for F. Y. 19 60	331,500
Cash Advances--Non-Federal		Appropriations to Date	14,204,520
Adjustment	1/ 27,000	Initial Underfinancing F. Y. 19 60	
		Appropriations Required for F. Y. 19 61	1,400,000
Total to be Allocated	1/ 18,340,607	Balance to Complete after F.Y. 1961	$ 2,696,500

ALLOCATIONS

Irrigation	$ 8,537,607
Power	
M. & I. Water	67,400
Flood & Nav.	8,508,700
Recreation	37,000
Fish & Wildlife	639,000
Fishcultural	522,100
Total 1/	$ 18,340,607

REPAYMENT

Amount Repaid by Irrigators	$ 991,780
Amount Repaid by Power	7,590,827
Amount Repaid by M. & I. Water	67,400
Non - Reimbursable	9,690,500
Total	1/ $ 18,340,607

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 1,377
Repayment of Investment per acre:	
By Irrigators	$ 160
By Power Revenues	1,217
By M. & I. Water Users	None
Payment Capacity per Acre	$8.07
Annual Charges:	
O. & M.	$3.98
Construction	4.09
Total	$8.07

STATUS OF REPAYMENT CONTRACT: Contract with Cedar Bluff Irrigation District No. 6 executed September 3, 1959. Contract for municipal water with City of Russell, Kansas, scheduled March 1960.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Storage Facilities-Completed	377,000 A.F	100	6-59	Temporary Camp		100	--
Cedar Bluff Dam & Reservoir - Supplemental Construction		15	6-64				
Cedar Bluff Canal, Laterals and Drains	6,200 ac.	5	6-65				
General Service Equipment		0	12-64				

Acreage Full Supply 6,200 | Supplemental Supply None | Total Acres 6,200 | Power kw None

Region	Date	Project and State
7	1-18-60	Missouri River Basin Project, Cedar Bluff Unit, Kansas

BR-256

1 Includes $25,000 capitalized operation, maintenence, and replacement to be financed with operation and maintenance appropriations and $2,000 interest during construction on municipal water facilities.
2 For completed storage facilities (Cedar Bluff Dam) and irrigation planning.

Agricultural production present and future

Principal crops prior to irrigation are small grains, row crops, and some forage crops. With irrigation, there is expected to be an increase in acreages seeded to forage crops and vegetables.

JUSTIFICATION

Description.—The Cedar Bluff unit is located in central Kansas. The completed Cedar Bluff Dam provides control of floods originating in the upper reaches of the Smoky Hill River and furnishes needed fish and wildlife conservation, together with recreational opportunities. This development will provide irrigation for 6,200 acres of irrigable lands to be supplied from storage in the existing reservoir.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Cedar Bluff Dam and Reservoir, $219,062.—For completion of construction of the outlet works extension on Cedar Bluff Dam.

Cedar Bluff system—canal, laterals, and drains, $1,187,938.—To initiate construction of the main canal and to complete design data and to initiate designs and specifications for the remaining canals and laterals.

Service facilities, depreciation, and salvage, —$4,000.—Represents the distribution of prior costs of service facilities to permanent properties.

Other project costs, $2,000.—For cooperative agency assistance and development farm operations.

Consolidated expenditures and credits, —$5,000.—For Solicitor's Office charges financed from appropriation to that Office.

Changes in total obligations

	Obligations
1960 congressional justification	(1)
1961 congressional justification	$18,301,020

1 Not included in fiscal year 1960 congressional justification.

DESCRIPTION OF PROJECT

Chairman HAYDEN. Will you tell the committee about this project?

Commissioner DOMINY. Well, this unit is located in central Kansas. The Cedar Bluff Dam, which provides in addition to irrigation, regulation for flood control and other multiple functions, was built some time ago. We have delayed the start of irrigation facilities until an irrigation district is formed and repayment contract executed and that has been done, and we are starting work on this unit with money appropriated in fiscal 1960. The funds requested this year would be to continue the construction of the irrigation facilities.

Chairman HAYDEN. The justification indicates that a municipal water contract with the city of Russell, Kans., was scheduled for March 1960. What is the status of this contract?

Commissioner DOMINY. On July 17, 1959, the city of Russell, Kans., adopted a resolution indicating the city's willingness to enter into a long-term repayment contract for storage space in Cedar Bluff Reservoir. A draft of the revised contract was prepared at that time and progress toward contract execution was interrupted because of the ill health of both the city attorney and the city manager.

I think I can give you unqualified assurance that we will get this contract because the city has been getting water from Cedar Bluff under an annual temporary contract over a period of years and all we are doing is converting those temporary contracts into this permanent one. The city does need the water and recognizes the value of it and, Mr. Chairman, I have no doubt that we will have that contract in due time. In the meantime they are paying us for what water they use under annual temporary contracts.

EAST BENCH UNIT, MONTANA

Chairman HAYDEN. The budget program includes $2,800,000 for the continuation of construction of the East Bench unit in Montana. The justifications will be included in the record.

(The justification follows:)

PF-60
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin--Southwestern Montana in Beaverhead County. The project works extend north from Clark Canyon Dam to lands near the City of Dillon.

AUTHORIZATION Flood Control Acts of 1944 and 1946 | **B/C RATIO** 2.05 | **Date** 8/24/59

LAND CERTIFICATION Scheduled March 1960 | **DEFINITE PLAN REPORT** Revised report scheduled March '60

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 20,195,000	Appropriations to June 30, 1959	$
Net Property and Other Transfers	645,000	Appropriations for F. Y. 1960	100,000
Cash Advances--Non-Federal		Appropriations to Date	300,000
Adjustment	1/ 879,000	Initial Underfinancing F. Y. 1960	200,000
		Appropriations Required for F. Y. 1961	2,800,000
Total to be Allocated	$ 21,719,000	Balance to Complete after F.Y. 1961	$ 16,895,000

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE	New	Suppl.
Irrigation	$ 17,200,000	Amount Repaid by Irrigators	$ 3,066,000	Irrig. Invest. per Acre	$ 345	
Power		Amount Repaid by Power	14,149,000	Repayment of Investment per acre:		
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 61	
Flood & Nav.	3,368,000			By Power Revenues	284	
Recreation	15,000			By M.& I.Water Users	---	
F & W.	1,136,000	Non - Reimbursable	4,504,000	Payment Capacity per Acre	5.33	1.32
Total	$ 21,719,000	Total	$ 21,719,000	Annual Charges: O. & M.	3.00	0.11
				Construction	2.25	1.04
				Total	5.25	1.15

STATUS OF REPAYMENT CONTRACT: The water service and repayment contract with the East Bench Irrigation District and the water service contract with the Clark Canyon Water Supply Co. were executed October 8, 1958, following validation of the contracts on July 11, 1958. Repayment contract arrangements are complete.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Clark Canyon Dam and Reservoir	261,000 AF	2/ 4	6/64	General Property		0	6/64
Barretts Diversion Dam and				Permanent Operating			
East Bench Canal		2/ 3	6/65	3/ Facilities		2/ 1	6/65
East Bench Laterals		2/ 3	6/65	3/ Temporary Camp		2/ 1	6/61
East Bench Drains, Channels,							
and Floodworks		2/ 3	6/75				

Acreage Full Supply 21,800 Supplemental Supply 28,004 Total Acres 49,804 Power kw ---

Region	Date	Project and State
6	1/18/60	Missouri River Basin Project, East Bench Unit, Montana

BR-259

[1] Assignment of Canyon Ferry storage cost of $879,000 to this unit.
[2] Represents investigation work.
[3] Essentially complete.

Agricultural production present and future

Full service land is presently used principally for dry range; shift to forage and cereal crops is anticipated upon irrigation.

Supplemental service land is presently used for forage and feed grain crops, no change in pattern is anticipated upon development of supplemental water supply.

JUSTIFICATION

Description.—This is a multipurpose unit which will provide a full water supply for the irrigation of 21,800 acres of semiarid land and will provide a supplemental water supply for 28,004 acres of presently irrigated land in the southwestern part of Montana. The unit will also have flood control, recreation and fish and wildlife benefits.

Appropriation title.—"Construction and rehabilitation."

Work proposed, fiscal year 1961

Clark Canyon Dam and Reservoir, $2,265,000.—A contract will be awarded for relocation of the railroad adjacent to the reservoir area. This construction is coordinated with relocation of U.S. Highway No. 91 which will parallel the relocated railroad. The highway relocation is scheduled to be accomplished as a part of proposed reconstruction under the interstate highway program. Design data will be completed and specifications issued for relocation of a county road around the reservoir connecting to the interstate highway at the damsite. Connecting links to this road are scheduled to be constructed by the State highway commission. Negotiations will be continued for relocation of transmission lines and the balance of the communication lines. Designs will be completed for the dam and reservoir, with plans and specifications to be issued early in the next year. Land and rights negotiations for the entire reservoir area will be completed.

Barratts diversion dam and east bench canal, $190,000.—Provides for the continuation of collection of design data for the diversion dam and canal. The preparation of designs and specifications for construction of these features will be initiated.

East bench laterals, $90,000.—The program provides for the continuation of design data collection and for initiation of work on the designs and specifications for the first block of laterals.

East bench drains, channels and floodworks., $50,000.—Design data collection will be continued on these features.

Permanent operating facilities, $44,000.—The program provides for completion of the office, shop, warehouse, garages, oil house and utilities, all of which will be utilized during the construction period. The program also provides for rights-of-way, grading of camp area, and fencing. Details are as follows:

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
Construct office, shop warehouse, garage, oil house and utilities for temporary use during construction and permanent use as project headquarters	$68,000	----------	$46,000	$22,000	----------
Construct two-stall garage at damsite for temporary use by inspection personnel and permanent use for operation and maintenance equipment	5,000	----------	1,500	3,500	----------
Furnish automotive equipment	22,000	----------	----------	----------	$22,000
Furnish ½ cubic yard dragline, D4 tractor and miscellaneous work and operating equipment	57,000	----------	----------	----------	57,000
Minor contracts (including grading, fencing, R/W etc.)	67,000	----------	13,500	18,500	35,000
Total	219,000	----------	61,000	44,000	114,000

Temporary camp, $94,000.—Temporary construction facilities will be provided consisting of purchase and installation of trailers for temporary housing of Government employees. Details are listed below:

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
Trailers (30), 13 on hand; other units to be purchased in fiscal year 1961	97,000	----------	12,000	85,000	----------
Minor contracts	10,000	----------	1,000	9,000	----------
Total	107,000	----------	13,000	94,000	----------

Service facilities, depreciation, and salvage, $42,000.—This provides for automotive, office, shop, laboratory, and miscellaneous other equipment required for supervision and inspection of construction, $72,000 of which is partially offset by $30,000 of service facilities to be distributed to permanent properties on a use basis.

Other project cost, $25,000.—For settlers assistance program.

Change in total obligations

	Obligations
1960 congressional justification	(1)
1961 congressional justification	$20,195,000

[1] Not included in fiscal year 1960 congressional justification.

PROGRESS OF WORK

Chairman HAYDEN. Mr. Commissioner, do you have any comments on this unit?

Commissioner DOMINY. Mr. Chairman, this unit was included as a new start in fiscal 1960. The major work we have been doing up to date in fiscal 1960 is the engineering and design and laying out relocation routes of both the railroad and the highways, which are the first things we have to do. I think we are getting very fine cooperation from both the railroad and the Montana Highway Department and I think we'll be able to get contracts awarded in July. The money

requested here will permit us to move forward under those contracts and to get the dam and reservoir under contract as well.

FARWELL UNIT, NEBRASKA

Chairman HAYDEN. The budget program includes $7,700,000 for the Farwell unit in Nebraska. The justifications will be included in the record.

(The justification follows:)

PF: 65 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Missouri River Basin--Central Nebraska, between Middle and North Loup Rivers in Sherman and Howard Counties.

AUTHORIZATION: Act of August 3, 1956 | B/C RATIO 2.04 | Date 12-31-59

LAND CERTIFICATION: By Secretary, May 21, 1957 | DEFINITE PLAN REPORT: Approved by Commissioner, June 1956

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 31,682,000	Appropriations to June 30, 19 59	$ 695,000
Net Property and Other Transfers	1,657,000	Appropriations for F. Y. 19 60	2,778,750
Cash Advances--Non-Federal	.....	Appropriations to Date	3,473,750
Adjustment	1/ 269,000	Initial Underfinancing F. Y. 19 60	146,250
		Appropriations Required for F. Y. 19 61	7,700,000
Total to be Allocated	$ 1/ 33,608,000	Balance to Complete after F.Y. 1961	$ 20,360,000

ALLOCATIONS 4/		REPAYMENT		AMOUNTS PER ACRE			
Irrigation	$ 32,315,000	Amount Repaid by Irrigators	$ 9,313,000	Irrig. Invest. per Acre	$ 615	Payment Capacity per Acre	$ 8.14
Power		Amount Repaid by Power	2/ 23,058,000	Repayment of Investment per acre:		Annual Charges:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 1.77	O. & M.	$ 3.71
Flood & Nav.	369,000			By Power Revenues	4.36	Construction	3/ 4.38
Fish & Wildlife	868,000			By M. & I. Water Users	.....		
Recreation	56,000	Non - Reimbursable	1,237,000				
Total	1/ $ 33,608,000	Total	1/ $ 33,608,000			Total	3/ $ 8.09

STATUS OF REPAYMENT CONTRACT: Contract executed March 23, 1957 with Farwell Irrigation District and Loup Basin Reclamation District.

PRINCIPAL FEATURES

	Size or Cap.	Completion (% 1-1-60)	Completion (Date)		Size or Cap.	Completion (% 1-1-60)	Completion (Date)
Sherman Dam and Reservoir	69,100 AF	13	10-63	Farwell Channel Stabilization			
Arcadia Diversion Works	20 x 525 ft.	6	9-63	Measures (U.S.D.A.)		1	6-66
Sherman Feeder Canal	850 c.f.s.	8	12-63	Fish and Wildlife			
Farwell Distribution System and Drains	152,530 Ac.	5	6-66	Facilities		--	6-63
				Permanent Operating Facilities		--	6-66

Acreage Full Supply 52,530 | Supplemental Supply ..... | Total Acres 52,530 | Power kw .....

Region	Date	Project and State
7	1-18-60	Missouri River Basin Project, Farwell Unit, Nebraska

BR-264

[1] Includes $292,000 capitalized O.M. & R. to be funded by O. & M. appropriation and $290,000 of Missouri River Basin project interest-free power allocation less $313,000 Sherman Reservoir cost assigned to Sargent unit.

[2] Amount repaid by power consists of $23,002,000 irrigation costs and $56,000 reimbursable recreation costs.

[3] Exclusive of $0.05 per acre ad valorem tax to reclamation district which is used to meet water charges.

[4] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$32,336,000	$32,315,000
Flood control	369,000	369,000
Fish and wildlife	868,000	868,000
Recreation	56,000	56,000
Total to be allocated	33,629,000	33,608,000

Total to be allocated and irrigation reduced by $21,000 due to a decrease in suballocation of interest free pumping power from 22 to 20 percent.

Agricultural production, present and future

Present and future crops by percent of acreage in irrigable area are:

Crop	Present	Future
Corn	43	31
Alfalfa hay	12	18
Small grains	41	14
Sugar beets (or cash crop)	0	12
Irrigated pasture	0	20
Other	4	5
Total	100	100

JUSTIFICATION

Description.—The Farwell unit is located in central Nebraska in Sherman and Howard Counties and is being constructed primarily as an irrigation development although benefits will also accrue for flood control, recreation, and fish and wildlife. The unit will provide a full water supply for the irrigation of 52,530 acres presently dry farmed.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Sherman Dam and Reservoir, $2,180,000.—The program provides for the continuation of construction of Sherman Dam and Reservoir. Contracts for relocation of county roads in the reservoir area will be awarded and relocations of telephone, power transmission and distribution systems and gas lines in the reservoir area will be underway. Rights-of-way in the reservoir area will be acquired and a contract awarded for reservoir clearing.

Arcadia diversion works, $900,000.—The construction contract for the diversion structure across the Middle Loup River will be awarded. Right-of-way will be acquired and minor relocations of power and telephone lines will be underway.

Sherman feeder canal, $2,420,000.—Rights-of-way for both the first and second section of the Sherman feeder canal will be obtained. Contracts will be awarded for construction of the two sections of the Sherman feeder canal.

Farwell distribution system and drains, $2,130,000.—Acquisition of rights-of-way for the two sections of the Farwell main and lower main canal and first section of the Farwell main and lower main lateral system will be underway. Acquisition of rights-of-way for the second section of laterals will be initiated. Construction contracts for the first section of Farwell main and lower main canal and laterals will be awarded. The contract for the second section of the Farwell main and lower main canal will also be awarded and preparation of final designs and specifications for the laterals will be initiated. Collection of design data for the Farwell central canal and lateral system will be continued. Collection of design data for the first 12.6 miles of the Farwell south and upper south canal and laterals will be initiated.

Farwell channel stabilization measures (USDA), $55,000.—Work will be continued by the Soil Conservation Service on the collection of design data and the preparation of final designs and specifications for construction of channel stabilization works. The pilot channel stabilization work will be continued.

Fish and wildlife facilities, $5,000.—Design data will be completed for the restoration of wildlife habitat area and small contracts will be awarded for the work.

Service facilities, depreciation, and salvage, $30,000.—For the acquisition of vehicles, laboratory, survey and other work equipment all totaling $50,000 offset in part by distribution of $20,000 to project features on a use basis during the fiscal year.

Consolidated expenditures and credits, —$20,000.—For nonappropriation transfer of equipment and Solicitor's Office charges financed from appropriation to that office.

Change in total obligations

	Obligations
1960 congressional justification	$31,682,000
1961 congressional justification	31,682,000
No change	----------

CONSTRUCTION PROGRESS

Chairman HAYDEN. Are there any questions or comments you would like to make about this project?

Commissioner DOMINY. No, Mr. Chairman. The Farwell unit is coming along fine. We have several of the features under contract and construction is going very well.

FRENCHMAN-CAMBRIDGE PROJECT, NEBRASKA

Chairman HAYDEN. The budget program includes $5,439,000 for the Frenchman-Cambridge unit in Nebraska. The justifications will be included in the record.

(The justification follows:)

PF-45 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Missouri River Basin - In Hitchcock, Red Willow, Furnas and Harlan Counties in southwest Nebraska along Frenchman Creek and the Republican River to Orleans. McCook is the principal city in the project area

AUTHORIZATION: Flood Control Acts of 1944 and 1946 and Act of May 2, 1956 | B/C RATIO 1.87 | Date Dec. 1958

LAND CERTIFICATION: By Secretary, November 28, 1952, February 10, 1956, Jan. 15, 1957 | DEFINITE PLAN REPORT: Approved by Comm. Sept. 1951 Revision to be submitted 9/61

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 80,243,057	Appropriations to June 30, 19 59	$ 61,228,048
Net Property and Other Transfers	491,373	Appropriations for F. Y. 19 60	4,009,134
Cash Advances--Non-Federal		Appropriations to Date	65,237,182
Adjustment	122,478 1/	Initial Underfinancing F. Y. 19	
		Appropriations Required for F. Y. 19 61	5,439,000
Total to be Allocated	$ 80,856,908	Balance to Complete after F.Y. 19 61	$ 9,555,875

ALLOCATIONS 4/

Irrigation	$ 58,775,108
Power	
M. & I. Water	
Flood & Nav.	21,369,600
Recreation	2/ 160,500
Fish&Wildlife	551,700
Total	$ 80,856,908

REPAYMENT

Amount Repaid by Irrigators	$ 9,503,480
Amount Repaid by Power	49,389,128
Amount Repaid by M. & I. Water	
Non - Reimbursable	21,964,300
Total	$ 80,856,908

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 914
Repayment of Investment per acre:	
By Irrigators	$ 148
By Power Revenues	766
By M.& I.Water Users	
Payment Capacity per Acre	$ 8.99
Annual Charges:	
O. & M.	$ 2.84
Construction	3.71
Total	$ 6.55

STATUS OF REPAYMENT CONTRACT: Frenchman-Cambridge Irrigation District contract amended January 1956. Nine Irrigation District contract executed November 1956. Frenchman Valley Irrigation District contract executed in November 1956.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Storage Facilities-Completed	165,440AF	100	6-59	Red Willow System	4,150 ac.	3	12-63
Irrigation Facilities -				Frenchman-Cambridge Drains	114.5 mi.	6	6-66
Completed	25,534 ac.	100	6-59	Frenchman Creek			
Trenton Dam & Swanson Lake	253,950 AF	99	5-62	Channelization	50.0 mi.	15	6-62
Red Willow Dam & Reservoir	88,400 AF	5	9-62	Frenchman-Cambridge General			
Meeker-Driftwood System	13,506 ac.	98	4-60	3/ Service Equipment		66	6-66
Culbertson System	21,090 ac.	48	6-66	Permanent Operating Facilities		100	--
				Temporary Camps		100	--

Acreage Full Supply 54,680 acres Supplemental Supply 9,600 acres Total Acres 64,280 acres Power kw None

Region	Date	Project and State
7	1-18-60	Missouri River Basin Project, Frenchman-Cambridge Division, Nebraska

BR-268

1 Represents $122,478 capitalized O. M. & R. to be financed with O. & M. appropriation.

2 Includes $43,000 nonreimbursable recreation in keeping with report on Red Willow Dam and Reservoir and associated works approved by Public Law 85-783.

3 Essentially complete.

4 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$58,776,608	$58,775,108
Flood control	21,369,600	21,369,600
Recreation	159,000	160,500
Fish and wildlife	551,700	551,700
Total to be allocated	80,856,908	80,856,908

No basic change in allocation. The change in irrigation and recreation allocations were made to correctly allocate $1,500 representing cost of recreation facilities at Red Willow diversion dam to the recreation allocation.

Agricultural production present and future

Principal crops prior to irrigation were small grains, row-crop grains and some forage crops. With irrigation, there has been a decline in small grains with an increase in row-crop grains and forage crops. It is expected the vegetables and sugar beets will gain favor under irrigation in the future.

JUSTIFICATION

Description.—The division includes four multiple-purpose dams with a total active storage capacity of 507,800 acre-feet and irrigation facilities to serve a full water supply to 54,680 acres and a supplemental water supply to 9,600 acres. The reservoirs will provide storage for irrigation, flood control, recreation opportunities, improvement of fish and wildlife habitat, and minor benefits from pollution abatement.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Trenton Dam and Swanson Lake, $30,000.—For deferred maintenance contract with the Chicago, Burlington & Quincy Railroad Co.

Red Willow Dam and Reservoir, $2,850,747.—For continuing the construction of Red Willow Dam and the purchase of reservoir rights-of-way.

Culbertson systems—diversion dam, canals, laterals, and drains, $2,387,926.—The program provides for the completion of the second section of the Culbertson canal and for continuing construction of the Culbertson extension canal and laterals.

Red Willow system—diversion dam, canals, and laterals, $60,000.—For collection of field data and to initiate work on designs and specifications for the Red Willow diversion dam and the Red Willow canal and lateral system.

Frenchman-Cambridge Irrigation District drains, $54,000.—For the collection of field data on drains and for minor drainage construction.

Frenchman Creek channelization, $59,167.—To negotiate relocation agreements with outside agencies for raising bridges, improving roads and protecting railroad embankments.

Service facilities, depreciation and salvage, —$840.—Includes $42,000 for automotive, work, and laboratory equipment and $38,000 for replacement of the project office aircraft, which is more than offset by the distribution of $80,840 prior years equipment cost to permanent properties.

Other project costs, $8,000.—For settlers assistance program.

Consolidated expenditures and credits, —$10,000.—The program provides $10,000 for Solicitor's Office charges financed from appropriation to that Office, and $20,000 for acquisition of stores items, which will be distributed to project facilities during the year.

Changes in total project obligations

	Obligations
1960 congressional justification	$80,098,197
1961 congressional justification	80,243,057
Increase	144,860

Increase due to minor adjustments based on experience to date.

COMPLETION OF UNIT

Chairman HAYDEN. This unit has been under construction for a number of years. At the present rate of construction, when will it be completed?

RED WILLOW DAM

Commissioner DOMINY. Mr. Chairman, the principal feature that we are working on now is the Red Willow Dam and Reservoir, which is the last of the main storage features and water control features of the project. We will be working on that program into fiscal 1963.

TRENTON DAM

The Trenton Dam and Swanson Lake feature of the project remaining in construction is mainly drains and work of that type and will continue into fiscal 1962.

The Red Willow canals and laterals will extend over into fiscal 1964. That will be the extension of the area that will be served primarily from this new dam now under construction and, of course, our district drain construction will continue over into 1963 and possibly 1964. I think we are coming along quite well with the Frenchman-Cambridge unit which is one of the large Missouri Basin units.

GLENDO UNIT, WYOMING

Chairman HAYDEN. The budget program includes $775,280 for the Glendo unit in Wyoming. The justifications will be included in the record.

(The justification follows:)

PRC 63 (7) (8) 1
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin, North Platte River Basin in southwestern Wyoming, Natrona and Platte Counties.

AUTHORIZATION Glendo Unit: Special act of July 16, 1954
Gray Reef Dam and Reservoir: P.L. 85-695 appr. 8/20/58

B/C RATIO 1.54 Date 12-7-59

LAND CERTIFICATION By Secretary, October 18, 1954

DEFINITE PLAN REPORT Glendo Unit: 1-23-53 approved by
Gray Reef: 4-29-59 Commissioner

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 44,909,628	Appropriations to June 30, 19 59	$ 42,021,090
Net Property and Other Transfers	101,791	Appropriations for F. Y. 1960	1,571,300
Cash Advances--Non-Federal		Appropriations to Date	43,592,390
Adjustment	1/ -5,580,342	Initial Underfinancing F. Y. 1960	0
		Appropriations Required for F. Y. 1961	775,280
Total to be Allocated	$ 39,431,077	Balance to Complete after F.Y. 19 61	$ 541,958

ALLOCATIONS 2/

Irrigation	$ 3,924,710
Power	28,774,367
M. & I. Water	--
Flood & Nav.	5,466,450
Fish&Wildlife	1,251,950
Recreation	13,600
Total	$ 39,431,077

REPAYMENT

Amount Repaid by Irrigators	$ 2,376,000
Amount Repaid by Power	30,336,677
Amount Repaid by M. & I. Water	
Non - Reimbursable	6,718,400
Total	$ 39,431,077

AMOUNTS PER ACRE 2/

Irrig. Invest. per Acre	$ 104
Repayment of Investment per acre:	
By Irrigators	$ 63
By Power Revenues	41
By M & I Water Users	
Payment Capacity per Acre Foot	$ 1.90
Annual Charges:	
O. & M.	$ .10
Construction	1.80
Total	$ 1.90

STATUS OF REPAYMENT CONTRACT: Seven contracts with separate canal companies have been executed for 18,000 acre-feet of the maximum quantity of 40,000 acre-feet available. Ultimate deliveries are estimated to average 33,000 acre-feet annually over 40-year repayment period.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Glendo Dam and Reservoir	798,400 A.F.	99	10-59				
Glendo Powerplant & Switchyard	24,000 KW	98	6-60				
Gray Reef Dam and Reservoir	1,810 A.F.	10	4-61				
Fremont Canyon Powerplant and Switchyard	48,000 KW	84	12-60				

Acreage Full Supply -- Supplemental Supply 37,578 Total Acres 37,578 Power kw 72,000

Region	Date	Project and State
7	1-18-60	Missouri River Basin Project, Glendo Unit, Wyoming

BR-276

[1] The adjustment principally represents a deduction of $6,870,900 for the portion of Glendo unit power investment associated with irrigation pumping power requirements on other units. This amount is partially offset by the inclusion of $1,290,558 repayable interest during construction.

[2] Averages in these columns are on the basis of a reservoir water yield of 33,000 acre-feet annually for irrigation.

[3] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$3,958,720	$3,924,710
Power	28,275,529	28,774,367
Flood control	5,513,820	5,466,450
Fish and wildlife	1,262,800	1,251,950
Recreation	13,600	13,600
Total to be allocated	39,024,469	39,431,077

The "Total to be allocated" and the "Power allocation" have been increased by a change from 22 to 20 in the percentage of the power allocation suballocated to other units for interest-free irrigation pumping. The increase has been partially offset by a reduction in estimate of joint facilities and specific power facilities. Changes in other functions are associated reduced cost of joint works.

Agricultural production, present and future

Present and future crops by percent of acreage in irrigable area:

Crop	Present	Future
Irrigated pasture	23	20
Corn	23	25
Dry beans	16	15
All hay	15	15
Sugar beets	15	15
Grain (all)	5	5
Other	3	5
Total	100	100

Not much change in the land use is anticipated on this project since the irrigation water supplied by this project is supplemental to the existing supply and the area has been irrigated over 50 years. Present crop rotations have been established through experience and because of economic factors and fit the area very well.

JUSTIFICATION

Description.—This project, located in southeastern Wyoming, will provide flood control regulation of upstream power releases and storage and delivery of water for irrigation of lands in Wyoming and Nebraska. In addition to generation of energy at the Glendo and Fremont Canyon powerplants, the regulation of water provided by the Glendo Reservoir will result in converting operations at the Alcova powerplant from a seasonal to a year-round basis.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Glendo Dam and Reservoir, $55,792.—For extraordinary maintenance on railroad and relocations which may develop in connection with relocation work.

Gray Reef Dam and Reservoir, $193,328.—This program provides for completion of Gray Reef Dam and Reservoir.

Fremont Canyon powerplant and switchyard, $706,986.—For completion of Fremont Canyon powerplant and switchyard.

Service facilities, depreciation and salvage, —$267,685.—Represents the transfer of $170,000, the undepreciated value of Fremont Canyon Government community, to the Fremont Canyon powerplant, $102,000 for service facility salvage and $12,685 for prior-year costs distributed to features. These are partially offset by the procurement of automotive, work, and laboratory equipment.

Consolidated expenditures and credits, $86,859.—The program provides $3,300 for acquisition of stores items which will be offset by $18,441 worth of stores items that will be used on project features during the year. Also included is $102,000 for the salvage value of service facilities to offset the same item included with "Service facilities, depreciation and salvage," as the funds received from the salvage must be returned to the Treasury and are not available for expenditure on this project.

Change in total obligations

	Obligations
1960 congressional justification	$45,109,914
1961 congressional justification	44,909,628
Decrease	—200,286

The decrease is due to refinement of the estimate as the unit nears completion. A cost reduction of $300,286 offset in part by $100,000 increase for tailrace modifications at Glendo powerplant.

FREMONT CANYON

Chairman HAYDEN. As I understand the justifications this unit will be substantially completed in fiscal 1961. Is that correct?

Commissioner DOMINY. Yes, sir. We have been delayed a little bit in the Fremont Canyon plant, which is the principal feature of the project. The contractor got a little bit behind but we believe now he is prepared to move forward with more expedition and we feel quite confident that the funds requested in fiscal 1961 will wind up this unit of the Missouri River Basin project.

HELENA VALLEY UNIT, MONTANA

Chairman HAYDEN. The budget program includes $565,000 for the Helena Valley unit in Montana. The justifications will be included in the record.

(The justification follows:)

PF-63 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin, Central Montana in Lewis and Clark County adjoining the City of Helena

AUTHORIZATION Flood Control Acts of 1944 and 1946 | B/C RATIO 1.40 | Date 9/1/59

LAND CERTIFICATION By Secretary of Interior 3/22/57, Certification for revised acreage in FY 1960 | DEFINITE PLAN REPORT Approved by Commissioner March 1954

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 14,104,741	Appropriations to June 30, 19 59	$ 10,437,291
Net Property and Other Transfers	265,259	Appropriations for F. Y. 19 60	2,029,950
Cash Advances--Non-Federal		Appropriations to Date	12,467,241
Adjustment	1/ 1,096,976	Initial Underfinancing F. Y. 1960	
		Appropriations Required for F. Y. 1961	565,000
Total to be Allocated	$ 15,466,976	Balance to Complete after F.Y. 1961	$ 1,072,500

ALLOCATIONS 3/		REPAYMENT		AMOUNTS PER ACRE	Full	Suppl.
Irrigation	$ 14,033,976	Amount Repaid by Irrigators	$ 1,517,000	Irrig. Invest. per Acre	$ 796	
Power		Amount Repaid by Power	12,522,976	Repayment of Investment per acre:		
M. & I. Water	728,000	Amount Repaid by M. & I. Water	728,000	By Irrigators	$ 86	
Flood & Nav.				By Power Revenues	710	
Other 2/	705,000	Non - Reimbursable	699,000	By M. & I. Water Users		
Total	$ 15,466,976	Total	$ 15,466,976	Payment Capacity per Acre	$5.955	4.26
				Annual Charges: O. & M.	4.24$	
				Construction	1.60	4.26
				Total	5.84$	4.26

STATUS OF REPAYMENT CONTRACT: Executed November 1956 with Helena Valley Irrigation District for 12,533 acres and with the city of Helena on September 27, 1956. Amendment for increase in district area and increase in district obligation confirmed by Court July 15, 1959, and contract executed December 16, 1959.

PRINCIPAL FEATURES

	Size or Cap.	Completion %-1-60	Completion Date		Size or Cap.	Completion %-1-60	Completion Date
Helena Valley Dam & Regulating Reservoir	10,600 A.F.	89	6/62				
Pumping Plant	10,000 H.P.	100	5/59	Permanent Operating Facilities		98	8/60
Tunnel and Canals	33.7 Mi.	93	12/67				
Lateral System	13,973 Ac.	76	12/61				
Drainage System		20	6/68				

Acreage Full Supply 13,973 Supplemental Supply 3,658 Total Acres 17,631 Power kw --

Region	Date	Project and State
6	1-18-60	Missouri River Basin Project, Helena Valley Unit, Montana

BR-280

1 Includes Canyon Ferry Dam and Reservoir costs assigned to irrigation function of $1,021,976, and to M. & I. water function of $45,000. Also includes interest during construction on M. & I. allocation of $30,000.
2 Includes fish and wildlife of $699,000 nonreimbursable and recreation of $6,000 reimbursable.
3 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$13,527,976	$14,033,976
M. & I. water	727,916	728,000
Other	713,000	705,000
Total to be allocated	14,968,892	15,466,976

The change in Total to be allocated is primarily due to an increase in obligations for construction of irrigation facilities. Change in M. & I. water represents rounding. Change in "Other", represents a correction in the Fish and Wildlife allocation.

Agricultural production present and future

Present land use is for cereals and forage. Under full irrigation, an increase in forage crops is anticipated.

JUSTIFICATION

Description.—The unit is located in central Montana adjoining the city of Helena. Water supply made available by the unit is used for new and supplemental irrigation, and municipal consumption. Fish and wildlife protection and recreation are other benefits of the unit.

Appropriation Title.—Construction and Rehabilitation.

Work proposed, fiscal year 1961

Helena Valley Dam and regulating reservoir, $55,000.—The program provides for minor completion work; enlargement of the bypass canal; ripping and discing of reservoir floor; and other investigations to determine ultimate reservoir treatment requirements.

Helena Valley tunnel and canals, $114,550.—The program provides for the completion of presently planned canal lining for the main canal system and priming and puddling the completed canals.

Lateral system, $113,661.—For completing construction of laterals, continuing priming and puddling and minor completion work.

Drainage system, $250,450.—Construction of drains will be continued.

Permanent operating facilities, $5,500.—The program provides for purchasing of minor items of operating equipment to be retained on the job after completion of construction.

Service facilities, depreciation, and salvage, —$6,500.—Provides $2,000 for purchase of miscellaneous work and laboratory equipment which is more than offset by the distribution of $7,500 of prior costs to permanent property and $1,000 for salvage.

Other project costs, $22,000.—This provides for continuing settlers assistance type activities and minor completion work.

Consolidated expenditures and credits, $10,339.—Represents $20,000 credit to project costs for funds collected and returned to Treasury which is partially offset by $9,661 for nonappropriation transfers.

Change in Total Obligations

	Obligations
1960 congressional justification	$13,604,241
1961 congressional justification	14,104,741
Increase	500,500

The estimate was increased $588,310 to cover adjustments in noncontract costs to reflect a longer period for completion of work and to cover unanticipated costs that developed in incorporation of the new lateral and drainage systems with the existing systems. Also an increase of $145,205 for temporary bypass construction required at Helena Valley Dam and regulating reservoir necessary because of excessive water loss. These increases were partially offset by a decrease of $231,000 as a result of adjustments in the estimate to reflect contract quantities, and $2,015 for minor adjustments.

HELENA, MONT., CITY WATER

Chairman HAYDEN. Do you have any questions or comments on this unit?

Commissioner DOMINY. Well, we have one problem that I want to alert the committee about. We have a little equalizing reservoir on this system that is of real value not only to irrigation by having a little holding reservoir closer to the farms but also invaluable to deliver city water to the city of Helena.

Chairman HAYDEN. I remember the discussion about that.

Commissioner DOMINY. And although our studies did not indicate—and I can assure you that we made the usual very intensive geologic analysis—those studies did not indicate we would have any problem on this. But after we started using this small reservoir it did not have very good bottom and we are having considerable trouble providing a seal for that regulating reservoir. We are not just certain yet what we may have to do.

SEALING OF RESERVOIR

What we are trying to do is to seal it in as inexpensive a fashion as possible and if this does not work we may be back another year.

Chairman HAYDEN. How do you plan to do this sealing?

Commissioner DOMINY. We are doing a lot of deep plowing and discing in of clays and things like that. We drained it last fall and have been working on it both last fall and this spring and we will find out this season whether that very inexpensive method of sealing will work or not. If it does not we may have to come up with some alternative that might cost more.

Chairman HAYDEN. I hope there is no gypsum there like you encountered elsewhere.

Commissioner DOMINY. No, I don't think we have any problem of that sort.

Chairman HAYDEN. As I recall the incident the gypsum just melted out and the water drained away. You are watching out for gypsum in the future?

Commissioner DOMINY. Yes, Mr. Chairman; yes, indeed, we do watch for it.

OWL CREEK UNIT, WYOMING

Chairman HAYDEN. The budget program includes $455,000 for the Owl Creek unit in Wyoming.

The justifications will be included in the record.

(The justification follows:)

PF-65 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin on South Fork of Owl Creek in the Bighorn River Watershed approximately 40 miles northwest of Thermopolis, Wyoming.

AUTHORIZATION Flood Control Act of December 22, 1944 — B/C RATIO 0.79 — Date 9/3/59

LAND CERTIFICATION By Secretary September 15, 1955 — DEFINITE PLAN REPORT Approved by Commissioner 11/3/50

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 5,377,761	Appropriations to June 30, 1959	$ 3,960,098
Net Property and Other Transfers	617,239	Appropriations for F. Y. 1960	982,663
Cash Advances--Non-Federal		Appropriations to Date	4,942,761
Adjustment	1/ 1,116,500	Initial Underfinancing F. Y. 1960	
		Appropriations Required for F. Y. 1961	455,000
Total to be Allocated	$ 7,111,500	Balance to Complete after F.Y. 1961	$ -------

ALLOCATIONS 3/

Irrigation	$ 6,944,090
Power	
M. & I. Water	
Flood & Nav.	74,480
Fish & Wildlife	92,930
Total	$ 7,111,500

REPAYMENT

Amount Repaid by Irrigators	$ 1,048,000
Amount Repaid by Power	5,896,040
Amount Repaid by M. & I. Water	
Non-Reimbursable 2/	167,460
Total	$ 7,111,500

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 529	Payment Capacity per Acre	$ 4.42
Repayment of Investment per acre:		Annual Charges:	
By Irrigators	$ 80	O. & M.	$ 1.52
By Power Revenues	4.49	Construction	2.00
By M. & I. Water Users		Total	$ 3.52

STATUS OF REPAYMENT CONTRACT: Water Service Contract executed with Owl Creek Irrigation District October 28, 1955. Confirmed by Court.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Anchor Dam and Reservoir	17,300 A.F.	78	10/60				
Lucerne Pumping Plants 1 & 2	1,420 H.P.	100	6/56				
Canals and Conduits	40-9½ c.f.s.						
	3.7 Miles	100	6/56				

Acreage Full Supply — Supplemental Supply 13,123 Total Acres 13,123 Power by —

Region	Date	Project and State
6	1-18-60	Missouri River Basin Project, Owl Creek Unit, Wyoming

BR-564

[1] Includes $418,165 Boysen Reservoir construction cost and $697,000 Missouri River Basin power investment for irrigation pumping energy, and $1,335 for minor cost adjustments to completed work.

[2] Includes land easement for Lucerne pumping plant valued at $50.

[3] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$6,585,000	$6,944,090
Flood control	68,000	74,480
Fish and wildlife	90,000	92,930
Total to be allocated	6,743,000	7,111,500

The increase in total to be allocated is associated with increased obligations incurred in the construction of Anchor Dam and Reservoir. These increases are partially offset by a reduction in the suballocation of Missouri River Basin project interest free power costs for irrigation pumping from 22 to 20 percent.

Agricultural production present and future

Present crops include cereals 20 percent, forage 46 percent, miscellaneous field crops 3 percent and idle, fallow, farmsteads, roads, etc., 31 percent.

Future crops are expected to include cereals 22 percent, forage 69 percent, miscellaneous field crops 4 percent and idle, fallow, roads, etc., 5 percent.

JUSTIFICATION

Description.—The unit is located in north-central Wyoming about 40 miles northwest of Thermopolis, Wyo. Water supply made available by the unit is used for supplemental irrigation to Owl Creek Irrigation District lands and Indian landowners of the Arapahoe Ranch. Flood control and fish and wildlife protection are other benefits of the unit.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Anchor Dam and Reservoir, $453,842.—The program provides for completion of the dam and reservoir.

Service facilities, depreciation and salvage, —$6,800.—Distribution of prior year costs of service facilities to permanent properties and salvage.

Other project costs, $986.—This provides for minor completion of construction on the pumping plants and canals.

Consolidated expenditures and credits, $6,972.—Represents salvage, nonappropriation transfers of equipment and miscellaneous adjustments.

Change in total obligations

	Obligations
1960 congressional justification	$4,970,456
1961 congressional justification	5,377,761
Increase	407,305

The change is due to increase in the estimate for the dam because of unforeseen conditions consisting of extension of the contract construction time, $267,640; contract adjustments because of an additional solution cavity discovered in the right abutement, $118,583; increases to include reservoir fencing and a gaging station, $10,600; provision of a reservoir evacuation tube and control gate as a safety measure to completely evacuate the reservoir should it be necessary to further treat solution cavities, $21,990; and miscellaneous, —$11,508.

COMPLETION OF UNIT

Chairman HAYDEN. Will these funds complete the unit?

Commissioner DOMINY. Yes, sir. We expect to complete this unit in fiscal 1961, Mr. Chairman.

Chairman HAYDEN. Please comment on the construction difficulties you experienced on this unit.

Commissioner DOMINY. I think that most anything I could say would be merely to state once more what we put in the record a year ago.

Chairman HAYDEN. I know there was quite elaborate record made on that.

Commissioner DOMINY. We did discover as we excavated the foundations for the dam that there was a fault on the left abutment which required us to change the axis of the dam and that lengthened the dam slightly—when we moved the axis—and this cost some extra money.

Then, when we got to the bottom of the old riverbed and excavated to bedrock we discovered some cavities in the dolomite which were completely unexpected and our precontractor award investigations had not disclosed them. We also found cavities on the right abutment as we excavated it out. Of course, each of these cavities had

to be dug out and had to be filled with concrete which took more excavation and concrete than anticipated, and which added to the cost.

Also, we found one cavity in the reservoir area and this gave us considerable concern but a very exhaustive further check of the reservoir area has not disclosed any of these other solution cavities and we feel confident that we are going to be all right. If any should rear their ugly heads after we fill the reservoir, of course we will have to take remedial steps.

Chairman HAYDEN. That will be disclosed when the reservoir is filled?

Commissioner DOMINY. Yes, sir. The thing that might happen is that the weight of the water may disclose some problem areas that our investigation work has not disclosed. But we are going to know that pretty soon because we are going to be starting to fill the reservoir relatively soon.

TRANSMISSION DIVISION

Chairman HAYDEN. The budget program includes $24,415,000 for the Transmission Division of the Missouri River Basin project. The justifications will be included in the record.

(The justifications follow:)

PP-65 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin - North Dakota, South Dakota, and portions of Iowa, Colorado, Nebraska, Montana, Minnesota, and Wyoming.

AUTHORIZATION Flood Control Act of December 22, 1944 | B/C RATIO Included with generating units

LAND CERTIFICATION None Required | DEFINITE PLAN REPORT None Required

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 339,536,913	Appropriations to June 30, 1959	$ 131,433,114
Net Property and Other Transfers	3,511,199	Appropriations for F. Y. 1960	16,635,691
Cash Advances--Non-Federal		Appropriations to Date	148,063,798
Adjustment	1/-62,371,060	Initial Underfinancing F. Y. 1960	771,930
		Appropriations Required for F. Y. 1961	21,415,000
Total to be Allocated	$ 280,677,052	Balance to Complete after F.Y. 1961	$ 160,291,185

ALLOCATIONS 3/		REPAYMENT		AMOUNTS PER ACRE			
Irrigation	$	Amount Repaid by Irrigators	$	Irrig. Invest. per Acre	$	Payment Capacity per Acre	$ -
Power	280,573,394	Amount Repaid by Power	280,573,394	Repayment of Investment per acre:		Annual Charges:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$	O. & M.	$ -
Flood & Nav.				By Power Revenues		Construction	-
Other	2/ 103,658	Non - Reimbursable	2/103,658	By M. & I. Water Users			
Total	$ 280,677,052	Total	$ 280,677,052			Total	$ -

STATUS OF REPAYMENT CONTRACT:

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
			(See Next Page)				

Acreage Full Supply -- Supplemental Supply -- Total Acres -- Power kw --

Region	Date	Project and State
6 and 7	1/18-60	Missouri River Basin Project, (Includes Fort Peck Project) Transmission Division

32-209

1 Adjustments include:

Interest during construction	+$8,544,814
Interest-free power investment assigned to irrigation pumping (20 percent)	-68,593,772
Adjustments to plant accounts for completed work reflected in total project cost	-803,139
Interest during construction assigned to irrigation pumping	-1,518,963
Total	-62,371,000

2 Funds from Air Force for the Cheyenne-Fort Warren transmission line and Cheyenne substation additions amounting to $75,000. Also includes $1,276 of contributions by individuals for transmission right-of-way easements and contributions of $27,382 toward electrical facility on the Fort Peck project.

3 Change in allocations:

Allocations	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Power:		
Fort Peck project	$67,561,086	.....
Missouri River Basin, transmission division	253,637,434	$280,573,394
Power total	321,198,520	280,573,394
Other	.....	103,658
Total to be allocated	321,198,520	280,677,052

Change in total and power allocations is due to the deletion of the previously included cost from the Fort Peck project for facilities constructed by the Corps of Engineers, a change in the suballocation to interest-free irrigation pumping from 22 to 20 percent, an increase in total estimated obligations, and the inclusion of reimbursable interest during construction and interest-free irrigation pumping associated with the Fort Peck project previously excluded. "Other" represents contributions which were previously merged with the power allocation but is herein set out for clarity of presentation.

CONSTRUCTION AND REHABILITATION, MISSOURI RIVER BASIN PROJECT (INCLUDES FORK PECK PROJECT) TRANSMISSION DIVISION

Principal features

	Size or capacity	Completion	
		Percent Jan. 1, 1960	Date
MISSOURI RIVER BASIN PROJECT			
Completed lines and substations	3,839.5 miles, 1,797,093 kilovolt-amperes.	100	
Initial construction:			
Bismarck-Jamestown transmission line No. 2 and substation additions.	239 kilovolts, 99 miles.	12	March 1961.
Boysen-Pilot Butte transmission line and substations.	115 kilovolts, 37 miles, 10,000 kilovolt-amperes.	80	March 1960.
Dawson County-Bismarck transmission line and substation addition.	230 kilovolts, 209 miles.	48	February 1961.
Fargo-Granite Falls transmission and Morris substations.	230 kilovolts, 165 miles, 100,000 kilovolt-amperes.	69	June 1962.
Fort Thompson-Watertown-Granite Falls transmission line and substations.	230 kilovolts, 219 miles, 245,000 kilovolt amperes.	5	June 1966.
Garrison-Jamestown transmission line	230 kilovolts, 140 miles.	1	October 1962.
Garrison-Minot-Rugby transmission line No. 2 and substation additions.	115 kilovolts, 110 miles.	1	October 1961.
Jamestown-Fargo transmission line No. 2 and substation additions.	230 kilovolts, 83 miles.	3	January 1962.
Jamestown-Grand Forks transmission line No. 1 and substation addition.	115 kilovolts, 110 miles, 50,000 kilovolt-amperes.	1	October 1961.
Jamestown-Grand Forks 115-kilovolt transmission line No. 2 and substation addition.	115 kilovolts, 110 miles.	0	October 1963.
Kortes-Cheyenne-Pine Bluffs-Sidney transmission line and substations.	115 kilovolts, 209 miles, 10,000 kilovolt-amperes.	23	September 1961.
Oahe-Fort Thompson double circuit transmission line No. 3.	230 kilovolt, 54 miles.	3	June 1962.
Sioux City-Denison-Creston transmission line and substations.	161 kilovolt, 150 miles, 80,000 kilovolt-amperes.	0	September 1963.
Sioux City-Spencer transmission line and substations.	161 kilovolts, 70 miles, 55:000 kilovolt-amperes.	0	June 1962.
Utica Junction-Sioux Falls transmission line	230 kilovolts, 67 miles.	100	August 1959.
Additions and modifications to functionally completed lines and substations:			
Central North Dakota transmission line and substations.	6,625 kilovolt-amperes.	10	March 1961.
East River South Dakota substations	200,000 kilovolt-amperes.	3	June 1966.
Fargo-Grand Forks transmission line and substation.	----------	97	November 1959.
Fort Randall-Sioux City transmission line and substation.	230 kilovolts, 122 miles, 75,000 kilovolt-amperes.	----------	June 1963.
Jamestown-Fargo substations	160,000 kilovolt-amperes.	51	October 1963.
Mobridge-Oahe-Fort Randall tie lines and substations.	6.4 miles	1	June 1963.
Oahe-Midland-Rapid City tie lines and substations.	1.1 miles	3	October 1961.
Tap lines, substations and equipment to serve REA and other customers.	----------	18	June 1975.
Other system facilities	----------	63	Do.
Future electrical facilities	----------	----------	December 1999.

Principal features—Contiuued

	Size or capacity	Completion	
		Percent Jan. 1, 1960	Date
FORT PECK PROJECT			
Completed lines and substations	885.6 miles, 228,250 kilovolt-amperes.	100	
Initial construction: Fort Peck-Dawson County transmission line and substation.	230 kilovolts, 105 miles, 60,000 kilovolt-amperes.	53	December 1960.
Additions and modifications to functionally completed lines and substations:			
Havre-Shelby transmission line and substations	7,500 kilovolt-amperes.	2	February 1961.
Tap lines, substations, and equipment to serve REA and other customers.	43.1 miles, 53,250 kilovolt-amperes.	38	June 1975.
Other system facilities		71	June 1968.
Future electrical facilities			March 1975.

JUSTIFICATION

Description.—The division is located in Nebraska, North Dakota, South Dakota, and portions of Colorado, Montana, Wyoming, Minnesota, and Iowa. The transmission facilities of the Missouri River Basin project are necessary to interconnect and coordinate the operation of Bureau of Reclamation and Corps of Engineers hydroelectric powerplants in the basin and to deliver power for irrigation pumping, sales to municipalities, cooperatives, private utilities and other wholesale customers.

Appropriation title.—Construction and rehabilitation.

WORK PROPOSED, FISCAL YEAR 1961

Initial construction

Bismarck-Jamestown 230-kilovolt transmission line No. 2 and substation additions, $2,065,000.—The transmission line and its terminal facilities at Bismarck and Jamestown substations will be completed and energized by the close of the year. The contract for construction of footings and erection of towers will be completed early in the year, and the contract for furnishing and stringing conductor will be completed by the close of fiscal year 1961.

Dawson County-Bismarck 230-kilovolt transmission line and substation addition, $1,124,000.—The transmission line and the terminal facilities at Bismarck substation are scheduled for completion by March 1961 when the first unit of the second powerplant at Fort Peck is scheduled for completion by the Corps of Engineers.

Fargo-Granite Falls 230-kilovolt transmission line and Morris substation (formerly programed as Fargo-Granite Falls 230-kilovolt transmission line), $740,000.—The program provides for initiation of construction and purchase of right-of-way for the Morris substation. Morris substation is located about midpoint of the transmission line.

Fort Thompson-Watertown-Granite Falls 230-kilovolt transmission line and substations, $2,183,000.—Stringing of the second circuit on the Fort Thompson-Watertown section of the existing double circuit steel tower line will be started. Construction will be continued on Fort Thompson substation (initial development) and will be completed on additions at Granite Falls substation.

Garrison-Jamestown 230-kilovolt transmission line, $2,155,000.—A contract will be awarded for construction of footings and the furnishing and erecting of steel towers. Specifications will be issued for furnishing and stringing conductor.

Garrison-Minot-Rugby 115-kilovolt transmission line No. 2 and substation additions (formerly programed as Garrison-Voltaire-Rugby 115-kilovolt transmission line No. 2 and substations), $1,400,000.—This program item has been renamed because the line has been routed via Minot instead of Voltaire to make it possible to provide an interconnection with the Northern States Power Co. for power loads in the Minot area. Construction will continue on the transmission line. Specifications will be issued and contracts awarded for terminal facility equipment and construction work required at Rugby substation.

Jamestown-Fargo 230-kilovolt transmission line No. 2 and substation additions, $2,237,000.—Construction of footings and furnishing and erecting steel towers will continue. Specifications will be issued and a contract awarded for furnishing and stringing conductor. Equipment will be procured and an installation contract will be awarded for the line terminal facilities at Fargo substation.

Jamestown-Grand Forks 115-kilovolt transmission line No. 1 and substation addition, $1,600,000.—A contract for construction of the transmission line will be awarded. Specifications will be issued and contracts awarded for procurement and installation of terminal facility equipment at Grand Forks substation.

Kortes-Cheyenne-Pine Bluffs-Sidney 115-kilovolt transmission line and substations, $1,402,781.—The program provides for completion of the Kortes-Cheyenne section and the major portion of the Cheyenne-Pine Bluffs-Sidney section. In addition, Cheyenne and Sidney substation additions will be completed. Also, construction contracts for completion of Sidney substation additions and Kimball substation will be awarded.

Oahe-Fort Thompson 230-kilovolt double circuit transmission line No. 3, $1,576,000.—For continuing construction of a double circuit transmission line to interconnect Oahe Dam with Fort Thompson substation. Specifications will be issued and a contract awarded during the year for furnishing and stringing conductors and overhead ground wires.

Sioux City-Denison-Creston 161-kilovolt transmission line and substations, $1,410,000.—The program provides for completion of right-of-way for the initial section and award of a contract for construction of the transmission line. Equipment and installation contracts will be awarded for Denison substation. Right-of-way will be completed and equipment contracts will be awarded for Creston substation.

Sioux City-Spencer 161-kilovolt transmission line and substations, $970,000.—The program provides for completion of right-of-way acquisition and award of a contract for construction of the transmission line. Equipment and installation contract will be awarded for Spencer substation and for Sioux City substation additions.

Additions and modifications to functionally completed lines and substations

Central North Dakota transmission line and substations, $128,000.—Provides for completing the installation of transformer cooling and voltage control equipment in the Devils Lake substation; modification of terminal facilities for the Edgeley-Groton line, and the installation of transformer cooling in the Edgeley substation; and additions to Carrington substation for power delivery to Central Power Electric Cooperative (tricounty).

East River, S. Dak., substations, $794,300.—Included in the program are award of contracts for additions to Watertown substation to provide terminal facilities for the second circuit of the Fort Thompson-Watertown-Granite Falls transmission line which is under construction; completion of the initial 230-kilovolt development at Huron substation; and completion of additions at Tyndall substation for service to the city of Tyndall.

Fort Randall-Sioux City 230-kilovolt transmission line and substation, $1,497,000.—The program provides for issuance of specifications and award of a contract for installation of the second circuit on the existing 122-mile double-circuit steel towers for the Fort Randall-Sioux City 230-kilovolt transmission line; additions to Sioux City substation for terminal facilities for the Fort Randall-Sioux City second circuit; and additions at Sioux City substation of an additional 230/161-kilovolt transformer and circuit breakers for interconnection with the Iowa Public Service Co.

Jamestown-Fargo substations, $400,000.—Specifications will be issued and a contract awarded for installation of equipment in Jamestown substation for the terminal facilities for Jamestown-Fargo transmission line No. 2 and Jamestown-Grand Forks transmission line No. 1, both of which are under construction. Also, specifications will be issued and contracts awarded for Jamestown substation terminal facility equipment for the Garrison-Jamestown transmission line which is under construction. Installation of voltage control equipment in Fargo substation will be completed.

Mobridge-Oahe-Fort Randall tie lines and substations, $910,000.—The program provides for awarding contracts for stringing a second circuit on existing steel towers for the Fort Randall to Fort Thompson transmission line and for extending the existing 230-kilovolt line to Oahe switchyard. Also, reimbursement will be made to the Corps of Engineers for approach towers at Oahe switchyard.

Oahe-Midland-Rapid City tie lines and substations, $139,000.—A contract will be awarded for extending the existing Fort Randall-Oahe transmission line to the

Oahe switchyard and for reimbursing the Corps of Engineers for installation of switchyard approach towers. Also, provides for the completion of construction on the additions to Rapid City substation for a 115-kilovolt interconnection with Black Hills Power & Light Co.

Taplines, substations and equipment to serve REA and other customers, $642,000.—The installation of primary metering at East River Cooperative delivery points and work on the Chadron substation additions and stage 02 of the Ralston substation additions will be completed. Contracts will be awarded and installation specifications issued for procurement of equipment for Raderville substation. Specifications will be issued and a contract awarded for procurement of equipment for the Lovell and Thermopolis substation additions. Contracts will be awarded for electrical equipment for the Gunnison and Wray substations additions. The program also provides for continuation of metering installations to serve customers as needed.

Other system facilities, $603,000.—Included are new contracts for tie line load and frequency control equipment; a multichannel microwave system, radio relay stations to cover the new Iowa lines and movable equipment required for operation and maintenance of new transmission facilities being placed in service. Also provides for contract payments for furnishing and installing microwave equipment.

Future electrical facilities, $92,000.—This program covers investigation of the need for future transmission lines and substations, including network analyzer studies.

Service facilities, depreciation and salvage, —$20,000.—For purchase of automotive and other work equipment of $54,000 offset by distribution of $74,000 of prior year costs of service facilities to permanent properties.

FORT PECK PROJECT

Initial construction

Fort Peck–Dawson County 230-kilovolt transmission line and substation, $245,204.—The transmission line and associated substation additions at Dawson County substation are scheduled for completion by March 1961, when the first unit of the second powerplant at Fort Peck is scheduled for completion by the Corps of Engineers. Construction is coordinated with the connecting Dawson County-Bismarck line.

Additions and modifications to functionally completed lines and substations

Havre-Shelby 115-kilovolt transmission lines and substations, $20,000.—The program provides for completion of additions to Shelby substation.

Tap lines, substations and equipment to serve REA and other customers, $37,000.—The Wiota substation will be modernized to reduce existing operational hazards. Construction of a new substation will be initiated in the Wiota-Wolf Point area to serve a pumping plant for irrigation of Indian lands. The program also provides for continuation of metering installations in Bureau customer substations.

Other system facilities, $129,500.—The program provides for establishment of a second tie line load control area at Fort Peck, Mont. Also included are relocation of Terry radio relay station, installation of carrier equipment associated with new 230-kilovolt facilities, construction of a warehouse to facilitate storage and handling of materials and supplies, and the continuation of radio communication equipment purchases.

Future electrical facilities, $5,000.—This program covers investigation of the need for future transmission lines and substations, including network analyzer studies.

MISSOURI RIVER BASIN AND FORT PECK PROJECTS

Other project costs, $16,031.—This program includes minor work on completed transmission lines and substations, such as record drawings, minor adjustments and settlement of right-of-way.

Consolidated expenditures and credits, —$85,816.—Represents cost of stores procured in prior years and current year which will be distributed to permanent property or salvaged during the year and cost adjustments and nonappropriation transfers of cost and property.

Changes in total obligations

1960 congressional justifications:		
Missouri River Basin project, transmission division	$316,026,082	
Fort Peck project	22,105,936	
		$338,132,018
1961 congressional justifications		339,536,913
Increase		1,404,895

The fiscal year 1960 congressional justifications presented Missouri River Basin project transmission division and Fort Peck project separately. The fiscal year 1961 budget now presents these two on a consolidated basis.

The increase is primarily due to the addition of Iowa transmission lines, $8,890,000. This increase is partially offset by revisions to reflect actual bid prices and completion of contracts, $2,594,000; and a large number of changes in plans for future facilities based on refinement of designs and current estimates of the needs of the transmission system. Typical of these changes are: Reduction of $1,194,000 due to elimination of the requirement for a second overhead ground wire on the Fort Thompson-Granite Falls transmission line; elimination of additions to Devils Lake substation, $2,186,000; and elimination of additions to Grand Forks substations, $769,000.

The total reductions are offset in part by increases in other items also resulting from more current information on the facilities required to efficiently distribute the energy generated at federally constructed hydroplants in the Missouri River Basin.

IOWA TRANSMISSION LINES

Chairman HAYDEN. Representatives of the utilities serving Iowa appeared before the subcommittee and requested that funds for the construction of the "Western Iowa transmission lines" be deferred until the results of pending Bureau studies are known. What are the nature of these studies?

Commissioner DOMINY. Would you want to comment on that, Mr. Bennett?

Mr. BENNETT. Mr. Chairman, I think the main thing which the Iowa Public Service Co's. were trying to get across was this. We have not completed final network analyzer studies. There is in their view at least a possibility that those studies will indicate that our lines and their lines would in effect operate in parallel and if they do, their feeling is we should pay them wheeling cost.

Now, we do not know ourselves whether this will happen. As soon as we get the network analyzer studies finished they will show whether that does or does not happen. Even if it does in our judgment it should not affect the feasibility of building these lines.

Chairman HAYDEN. Well, how long will it take to determine this question?

Mr. BENNETT. We should have the answers to these questions by early summer.

Chairman HAYDEN. There was some question about the routing of these lines. Tell us about that.

DIAGONAL CONSTRUCTION

Commissioner DOMINY. Yes, Mr. Chairman. The cheapest way to build a line of this character—and it is considerably cheaper—is to go on a diagonal. As you know, the farms in Iowa are pretty well laid out in sections and on section and half section and quarter section lines in rectangular fashion.

The farmers did think that these diagonal lines would provide much greater interference to their normal farm operations than they would

following the square. However, we think we are gaining headway in explaining to them the nature of a line of this character, that the structures are of such size that we would actually—in addition to being much more expensive to construct and maintain—that we would actually interfere greater with their farming operations than if we go on a diagonal. This is true because if we have to follow the roads where there are existing telephone and telegraph and power lines now for local service, we would have to set back into the fields in any event and usually farm buildings and everything are located adjacent to the road.

If we go on a diagonal, we can adjust the length of span between these towers to a considerable degree to line them up in fence rows and woodlots and places where they would be as little obstruction to the farmer as possible.

Chairman HAYDEN. You must have had considerable experience with this elsewhere.

Commissioner DOMINY. We have, Mr. Hayden, and we are quite confident that as our educational programs proceed and the farmers realize the character of the line, that if we went on the square we would have to have guy wires reaching a way out in all directions at the right angle turns.

Senator YOUNG. Mr. Chairman, I think that this is the experience that the Bureau has in almost every place where they build a line. We had that problem in North Dakota and there was a little trouble there about it at first but most farmers were satisfied. No one, of course, likes to have something like this go across his land.

Commissioner DOMINY. As a matter of fact, we had some pretty good support from the State of Iowa when they approved a private utility line on a diagonal route and we believe that this problem will resolve itself quite satisfactorily. It would be almost prohibitive to build on the square. The diagonal is about one-fifth less expensive than the square on the same line.

Chairman HAYDEN. Are there any other comments on the Transmission Division?

Commissioner DOMINY. Mr. Bennett, do you have any other comments?

Mr. BENNETT. No, we have no other particular problems.

WEBSTER UNIT, KANSAS

Chairman HAYDEN. The budget program includes $617,000 for the Webster unit in Kansas. The justifications will be included in the record.

(The justifications follow:)

PP-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin - In Rooks and Osborne Counties in north central Kansas on the South Fork of the Solomon River.

AUTHORIZATION Flood Control Acts of December 22, 1944 and 1946 | B/C RATIO 1.92 | Date Dec. 1958

LAND CERTIFICATION March 19, 1957 | DEFINITE PLAN REPORT Revision approved February 28, 1957.

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 18,406,042	Appropriations to June 30, 1959	$ 14,126,223
Net Property and Other Transfers	260,958	Appropriations for F. Y. 1960	2,793,375
Cash Advances--Non-Federal	6,000	Appropriations to Date	16,919,598
Adjustment	22,000 1/	Initial Underfinancing F. Y. 1960	
		Appropriations Required for F. Y. 1961	617,000
Total to be Allocated	$ 18,695,000	Balance to Complete after F.Y. 1961	869,444

ALLOCATIONS 5/		REPAYMENT		AMOUNTS PER ACRE			
Irrigation	$ 10,883,000	Amount Repaid by Irrigators	$ 1,601,500	Irrig. Invest. per Acre	$ 1,281	Payment Capacity per Acre	$ 9.28
Power Contributions	2/ 6,000	Amount Repaid by Power	9,319,500	Repayment of Investment per acre:		Annual Charges:	
Flood & Nav.	7,289,000	Amount Repaid by M. & I. Water		By Irrigators	$ 188	O. & M.	$ 3.64
Recreation	38,000	Contributions	2/ 6,000	By Power Revenues	1,093	Construction	4.78
Fish&Wildlife	479,000	Non - Reimbursable	7,768,000	By M.& I.Water Users			
Total	$ 18,695,000	Total	$ 18,695,000			Total	$ 8.42

STATUS OF REPAYMENT CONTRACT: Webster Irrigation District No. 4, executed April 24, 1957 and validated October 22, 1957.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Webster Dam and Reservoir	260,700 A.F	100	12-59	3/ Temporary Camp		100	-
Woodston Diversion Dam	14.0'x151.0	92	12-59	3/			
Osborne Canals, Laterals							
Drains, Electric Service Lines	8,500 ac.	54	6-64	4/			
Permanent Operating Facilities		0	12-61	3/			

Acreage Full Supply 8,500 | Supplemental Supply None | Total Acres 8,500 | Power kw None

Region	Date	Project and State
7	1/18/60	Missouri River Basin Project, Webster Unit, Kansas

BR-297

1 Represents $22,000 capitalized O.M. & R. to be financed with O. & M. appropriation.
2 Non-Federal cash advance from Kansas State Highway Department for cost of extending siphon barrel to enable future widening of U.S. Highway No. 24.
3 Essentially complete.
4 Essentially complete except for drains.
5 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$10,889,000	$10,883,000
Flood control	7,289,000	7,289,000
Recreation	38,000	38,000
Fish and wildlife	479,000	479,000
Contributions		6,000
Total to be allocated	18,695,000	18,695,000

No actual change in basic allocation. An amount of $6,000 contributed by the State of Kansas covering increased length of siphon barrels to enable future widening of State roads has been set out as a separate item from the irrigation allocation.

JUSTIFICATION

Description.—The Webster unit is a multiple-purpose development consisting of a storage reservoir, diversion dam, canal, laterals, and drains. This development will provide irrigation for 8,500 acres of irrigable land, control floods originating in the upper reaches of the south fork of the Solomon River, and furnish needed fish and wildlife conservation together with recreational opportunities.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Osborne system—Canal, laterals, drains, and electric service lines, $587,000.—To complete the construction of the Osborne Canal, laterals, and electric service lines, and to collect field data for Osborne drains.

Permanent operating facilities, $29,000.—For purchase of equipment for the irrigation district.

Other project costs, $4,000.—For Settlers Assistance program.

Consolidated expenditures and credits, --$3,000.—Represents Solicitor's Office charges which will be financed from appropriation to that office.

Changes in total obligations

1960 congressional justification	$18,422,042
1961 congressional justification	18,412,042
Decrease	10,000

NOTE.—Decrease due to minor estimate adjustments.

ESTIMATED COMPLETION DATE

Chairman HAYDEN. At the present rate of construction, when will this unit be completed?

Commissioner DOMINY. We feel that we will finish currently scheduled work on this unit based on our present forecast of progress at the end of fiscal 1962, Mr. Chairman.

Chairman HAYDEN. It is going along all right, is it?

Commissioner DOMINY. Yes, sir; I think it is quite satisfactory.

YELLOWTAIL UNIT, MONTANA

Chairman HAYDEN. The budget program includes $2,500,000 for the initiation of construction of the Yellowtail unit in Montana. The justifications will be included in the record.

(The justifications follow:)

FY: 48
(7: 38)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Missouri River Basin, Southeastern Montana in Big Horn County. The Yellowtail Damsite is located on the Bighorn River 45 miles southwest of Hardin, Montana

AUTHORIZATION Flood Control Act of December 22, 1944. B/C RATIO 1.77 4/ Date 1-19-60

LAND CERTIFICATION Hardin unit scheduled prior to award of first construction contract. DEFINITE PLAN REPORT Approved by Comm. 11/10/50 Revision Scheduled Dec. 1960

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 107,491,129	Appropriations to June 30, 19 59	$ 2,966,129
Net Property and Other Transfers	1,808,871	Appropriations for F. Y. 19 60	--
Cash Advances--Non-Federal		Appropriations to Date	2,966,129
Adjustment	1/ -36,448,000	Initial Underfinancing F. Y. 19 60	--
		Appropriations Required for F. Y. 1961	2,500,000
Total to be Allocated	$ 72,852,000	Balance to Complete after F.Y. 19 61	$ 102,025,000

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE 3/	
Irrigation	$	Amount Repaid by Irrigators	$ --	Irrig. Invest. per Acre	$
Power	65,983,000	Amount Repaid by Power	65,983,000	Repayment of Investment per acre:	Payment Capacity per Acre $
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators $	Annual Charges:
Flood & Nav.	6,261,000			By Power Revenues	O. & M. $
P&WL	608,000			By M. & I. Water Users	Construction
Recreation	500,000	Non-Reimbursable	6,869,000		
Total	$ 72,852,000	Total	$ 72,852,000		Total $

STATUS OF REPAYMENT CONTRACT:

PRINCIPAL FEATURES

	Size or Cap.	Completion % (1-60)	Completion Date		Size or Cap.	Completion % (1-60)	Completion Date
Yellowtail Dam and Reservoir	1,375,000A.F.	2/ 6.	9/65				
Yellowtail Afterbay Dam	56' X 1320'	--	10/64	Permanent camp		--	6/66
Yellowtail Powerplant and Switchyard	200,000 kw	--	9/65	Temporary Camp		--	12/62
Minimum Basic Health & Safety Facilities	--	--	6/66				
Upstream Fish Rehab.							
Permanent Operating Fac.		--	10/65				

Acreage Full Supply -- Supplemental Supply -- Total Acres -- Power kw 200,000

Region	Date	Project and State
6	1/18/60	Missouri River Basin Project, Yellowtail Unit, Montana-Wyoming

BR-300

1 Consists of—

Interest during construction associated with commercial power	33,562,000
Irrigation allocation assigned to Hardin unit and Yellowstone pumping units	-24,530,000
Interest-free power investments assigned to other units of Missouri River Basin project (20 percent)	-15,480,000
Total adjustments	-36,448,000

2 No irrigation will be directly provided and no crops are involved.
3 Includes right-of-way acquisition.

JUSTIFICATION

Description.—The multipurpose Yellowtail Dam will be constructed on the Bighorn River in Bighorn County, Mont. It will be a concrete arch structure with a reservoir capacity of 1,375,000 acre-feet and will regulate runoff for irrigation, flood control, and power generation. The powerplant, at the toe of the dam, will have an installed nameplate rating of 200,000 kilowatts. The power is needed to supply existing and rapidly expanding power needs in southeastern Montana and northeastern Wyoming for irrigation pumping, REA, and commercial use. Benefits will also be provided for fish and wildlife, recreation, and sediment control.

Appropriation title.—Construction and rehabilitation.

Work proposed, fiscal year 1961

Yellowtail Dam and Reservoir, $750,000.—The program provides for preconstruction work, the award of the construction contract, and the start of construction on the Yellowtail Dam. Work will consist of grading and surfacing of the service road to the dam from the camp, payments to county for improvements to 10 miles of existing county road leading to the unit; and beginning excavation for the foundation of the dam. Right-of-way below the damsite will be purchased.

Yellowtail powerplant and switchyard, $275,000.—For preconstruction on powerplant and switchyard facilities and start of construction under dam contract of access road to powerplant site at the base of the dam.

Permanent operating facilities, $442,500.—This amount will provide for the initiation of construction of the operating facilities to be used by construction forces during the construction of the unit and will later be used in the permanent operation of the unit. These include access road, combination shop and fire station, warehouse and garage, and operating tools and equipment.

Permanent camp, $313,000.—Provides for initiation of construction of housing facilities and appurtenant streets and utilities. These facilities will be used by construction forces and later for operation and maintenance personnel as follows:

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
Operation and maintenance houses: 15 to be used during construction and 7 additional residences to be constructed later	$440,000	$10,000	----------	$200,000	$230,000
Streets, utilities, and miscellaneous	259,000	10,000	----------	113,000	136,000
Total	699,000	20,000	----------	313,000	366,000

Temporary camp, $575,000.—The program provides for the purchase and erection of 16 two-bedroom transa houses and partial payments on purchase of 32 transa houses to be delivered in fiscal years 1962 and 1963 and 20 trailers to be erected in advance of the permanent camp, streets, and service utilities. Construction of garages and community washhouses, streets, and utilities in temporary area will be initiated.

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
Transa houses (63)	$791,000	$27,000	----------	$347,000	$417,000
Trailers (20)	114,000	4,000	----------	110,000	----------
Streets, water and sewer systems, walks and lights	265,500	9,000	----------	98,000	158,500
Washhouses (5) and 5-stall garages (16)	106,000	----------	----------	20,000	86,000
Total	1,276,500	40,000	----------	575,000	661,500

Service facilities, depreciation, and salvage, $144,500.—For the initiation of construction of temporary warehouses, temporary garages, temporary administration building, laboratory, and the purchase of automotive and other equipment.

Changes in total obligations

1960 congressional justification	(1)
1961 congressional justification	$107,491,129

[1] Not included in the fiscal year 1960 congressional justifications.

DESCRIPTION OF PROJECT

Chairman HAYDEN. Describe this project, please.

Commissioner DOMINY. The Yellowtail unit of the Missouri River Basin project consists of the multiple-purpose Yellowtail Dam to be constructed on the Big Horn River in Big Horn County, Mont. It will be a concrete arch structure with reservoir capacity of 1,375,000 acre-feet and will regulate the runoff for irrigation, flood control and power generation. The powerplant will have an installed name plate rating of 200,000 kilowatts.

The reservoir will be extremely beneficial for fish and wildlife and recreational purposes. It will back up through southern Montana into Wyoming in beautiful mountain canyon country.

IRRIGATION FEATURES

The irrigation features which are not included now in our construction program ultimately will consist of the Hardin unit below the reservoir on some high quality benchland on two bench levels, the first bench above the river level and the higher bench on a mesa presently devoted to dryland wheat production. With irrigation, this will, of course, go out of wheat and into general irrigation agriculture.

Then in addition to regulating water in the Yellowtail Reservoir, we can build a number of pump units on the first bench downstream below the Hardin area in a number of locations so as to make several blocks or 2,000 to 5,000 acres of land in a given area economically feasibly to reach with water.

Chairman HAYDEN. What will be the lift in those proposed pumping plants?

Commissioner DOMINY. I don't think we propose to irrigate anything with a lift of over 250 feet in these units that we are proposing. Most of them will be less than that.

MARKET FOR POWER

Chairman HAYDEN. I assume you have a market for the power?

Commissioner DOMINY. We certainly feel we have. As a matter of fact, in the Missouri River Basin Eastern Division we are presently allocating our power on a shortage basis to the present customers. None of them can get all the power that they would like from our system and need alternate sources to round it out, either their own steam or they have to purchase steam from other sources.

Chairman HAYDEN. When will power come on the line?

Commissioner DONIMY. Mr. Campbell advises me there will be 50,000 kilowatts under our proposed construction schedule coming on in June of 1965. A second 50,000 kilowatts supply will be coming in, in June of 1965 also. So, there are 100,000 kilowatts coming on in June 1965. Then, the other two units of 50,000 kilowatts each would come on in October 1965.

FLOOD CONTROL

Chairman HAYDEN. Of course the dam will become a part of the comprehensive system of regulation of the Missouri River System?

Commissioner DOMINY. Yes, indeed.

Chairman HAYDEN. Will it help the capacity?

Commissioner DOMINY. It will help. We have allocated $6.2 million to flood control to be regulated here. It will help create better power on down below on the rest of the system also.

Chairman HAYDEN. That is what I thought.

Commissioner DOMINY. Yes, sir.

DRAINAGE AND MINOR CONSTRUCTION

Chairman HAYDEN. The budget program includes $598,000 for "Drainage and minor construction." The justifications will be included in the record.

(The justification follows:)

CONSTRUCTION AND REHABILITATION—DRAINAGE AND MINOR CONSTRUCTION

Summarized financial data

Allotment, fiscal year 1960	$567,450
Application of prior year funds	420,300
Initial underfinancing	61,425
Total obligations, fiscal year 1960	1,049,175
Allotment, fiscal year 1961	598,000
Total obligations, fiscal year 1961	598,000

Description.—The drainage and minor construction program consists of those units on which the major construction has been completed except for facilities which are temporarily deferred or for which relatively small amounts of funds are being requested in the budget year for drainage construction, minor repair or replacement work, miscellaneous finishing activities or preconstruction work on the temporarily deferred facilities.

Work proposed, fiscal year 1961

The fiscal year 1961 program involves work on six units, and preparation of technical records and as-built drawings. Six units having active programs during fiscal year 1960 will be inactive during fiscal year 1961.

Angostura unit, South Dakota, $128,000.—The program provides for continuation of surface and subsurface drainage work to protect the irrigated lands from seepage.

Crow Creek pump unit, Montana, $30,000.—Construction of drains will be continued during the year. Work will be continued on settlers assistance which includes work in connection with farm units and negotiations with the water users on repayment.

Hanover-Bluff unit, Wyoming, $197,000.—Drainage construction will continue in both the Highland, Hanover and Upper Bluff areas.

Kirwin unit, Kansas, $30,000.—These funds will be used for the payment of moving expenses of Kirwin Reservoir right-of-way claimants as provided under Public Law 85-433.

Sargent unit, Nebraska, $100,000.—These funds will be used for work related to possible settlement of waterpower interference rights with Loup River Public Power & Irrigation District and continuation of minor cleanup work. Canal lining will be installed as required.

Shadehill unit, South Dakota, $98,000.—Operations of Shadehill development farm will be continued. Investigations for definite plan report work will be continued with the objective of completing the report in fiscal year 1962.

Technical records and as-built drawings, $15,000.—Technical records of design and construction and as-built drawings will be prepared on completed separable features which have passed from the construction status to operation and maintenance status.

BUDGET PROCEDURE

Chairman HAYDEN. Are there any questions or comments on that?

Commissioner DOMINY. Well, we like this way of budgeting this finish-up work very much, and we are very glad that the committee

proposed to lump in a number of some completion items such as is done here.

We also secured a few years ago special legislation which permits us to deal with the water user's organization under this item of minor work completion, because they can do it frequently much better than we can in the winding up of drainage and adjustments of newly constructed canals and laterals.

INVESTIGATIONS

Chairman HAYDEN. The budget program includes $656,000 for Missouri River Basin investigations.

The justifications will be included in the record.

(The justification follows:)

CONSTRUCTION AND REHABILITATION—INVESTIGATIONS

Summarized financial data

Total obligations, fiscal year 1960		[1] $901,371
Allotment, fiscal year 1961	$656,000	
Total obligations, fiscal year 1961		656,000

[1] Excludes funds for advance planning which is now shown as a separate activity.

Description.—The Missouri River Basin investigation program consists of—

1. Unit investigations to determine the feasibility of and develop plans for individual units of the project which need authorization or reauthorization.
2. Basin surveys to evolve plans for subbasin development and to determine units worthy of more detailed investigations.

The activities of the Interior Missouri Basin Field Committee also are financed with Missouri River Basin investigations funds.

Status

Unit investigations.—In fiscal year 1960 unit investigations studies are in progress on seven units and divisions and continuation of negotiations and discussions on one other unit. Of these, a feasibility report will be completed on the North Loup division. A small amount of funds will also be used for cooperation with local interests on the Nelson Buck unit on which a reconnaissance report was completed last year.

Basin surveys.—The fiscal year 1960 program consists primarily of the continuation of the investigations of the Yellowstone division. In addition, basin reports on the South Platte River Basin and Bighorn Basin will be completed and miscellaneous studies in connection with completed basin investigations will be continued.

Work proposed, fiscal year 1961

Unit investigations.—The fiscal year 1961 program provides for active unit investigations on five units and divisions and continuation of negotiations and discussions with local interests on two other units and divisions. A description of these active units and the fiscal year 1961 program is as follows:

Region 6

Wagner unit, South Dakota pumping division, South Dakota, $200,000.—This unit is located in southeastern South Dakota along the Missouri River in Charles Mix County. The plan under study contemplates irrigation of about 24,800 acres of semiarid new lands with water from the Corps of Engineers' Fort Randall Reservoir, by pumping from the reservoir to a main canal and laterals.

The funds for fiscal year 1961 will be used to complete engineering surveys and location work, drainage studies, preparation of detailed designs and cost estimates, and economic studies leading toward completion of a feasibility report early in fiscal year 1962.

Region 7

Little Blue unit, Blue division, Nebraska, $95,200.—The Little Blue unit is located on the Little Blue River in Nuckolls, Jefferson, and Thayer Counties in south-central Nebraska. The Angus Dam and Reservoir will provide irrigation

water to approximately 24,000 acres of lands susceptible to irrigation by means of a canal extending from the reservoir to the project lands or by pumping from the river.

The requested funds will be used to complete topographic mapping and detailed land classification studies on selected areas. Hydrologic, economic, and drainage studies and cost estimates necessary for a feasibility determination for this unit will be initiated or continued. A report is scheduled to be completed in fiscal year 1962.

Mirage Flats extension unit, upper Niobrara division, Nebraska, $20,000.—This unit, located in northwestern Nebraska about 12 miles south of Hay Springs, will consist of Colwell Dam and Reservoir, Colwell canal and laterals and drains to serve some 5,900 acres of new lands contiguous to the existing Mirage Flats project.

A reconnaissance appraisal of this unit was initiated in fiscal year 1960 and the funds for fiscal year 1961 will be used to complete these studies. Initiation of detailed preconstruction studies will be dependent upon the results of the reconnaissance appraisal.

Nelson Buck unit, Kanaska division, Kansas, $1,000.—The Nelson Buck unit is located in north-central Kansas on Beaver Creek in Decatur County, Kans. The Herndon damsite, located approximately 1 mile west of Herndon, Kans., would provide service for some 3,000 acres of new land located downstream. The reservoir will also provide significant flood control, recreation, and fish and wildlife conservation benefits.

A reconnaissance report was completed in fiscal year 1959 and released to the local interests for review and an expression of their interest in the proposed plan. The above funds will be used to continue discussions with the State and local interests to assist them in formulating their opinions and desires.

North Loup division, Nebraska, $4,373.—The North Loup division comprises irrigable lands in the valley areas and on certain uplands of the North Loup River and upper reach of the main Loup River in central Nebraska. Potential features of the division include two dams and reservoirs, several pumping plants, and a comprehensive system of canals and laterals required to furnish irrigation water to about 53,000 acres of high quality land. Other potential benefits include recreation, fish and wildlife propagation, and possibly a small amount of flood control.

A feasibility report on this unit is to be completed in fiscal year 1960. The funds shown above will be used for continuation of negotiations with the local interests.

O'Neill unit, lower Niobrara division, Nebraska, $20,661.—The O'Neill unit is located in north-central Nebraska in the eastern third of the Niobrara River Basin. Principal storage facilities would be located near Norden, Nebr. The carriage system would begin at this point and carry water downstream to irrigate lands comprising about 66,000 acres lying on tablelands south of the Niobrara River in the vicinity of Atkinson and extending easterly beyond O'Neill. The unit would also provide storage capacity for the potential Springview unit.

The detailed engineering, economic, and agricultural studies leading to preparation of a feasibility-type report will be substantially completed by the end of fiscal year 1960 and the above funds will be used for the preparation and review of the feasibility report.

Wheatland unit, Laramie division, Wyoming, $130,000.—The unit comprises 52,500 acres of irrigable land in and adjoining the Wheatland Irrigation District in Platte County of southeastern Wyoming. The facilities of the district have been in operation for many years and the water users have suffered severely from frequent and recurring water shortages requiring detrimental changes in cropping patterns and curtailed cropping operations. The purpose of this investigation is to develop a plan to conserve and supplement the existing water supply for this project and to determine a program for the rehabilitation of the project facilities.

The fiscal year 1961 program will provide for the completion of detailed feasibility studies and preparation of a report late in the year.

Basin surveys, $134,458.—During fiscal year 1961, the basin surveys program will consist primarily of completion of a survey in the Yellowstone division in Montana and North Dakota. Work will also be accomplished on miscellaneous investigations in connection with basin surveys which have been completed in prior years.

Missouri River Basin Field Committee, $61,000.—These funds are required to finance the Missouri River Basin Field Committee which has the responsibility

of coordinating the development activities of all the Department of the Interior agencies involved in the conservation and utilization of the resources of the basin.

Adjustments, —$7,711.—Represents minor adjustments on nonappropriation transfers and other miscellaneous costs.

Other expenditures and credits, —$2,981.—Represents cost of service facilities and stores procured in prior years which will be distributed to active investigations or salvaged during the budget year.

PROPOSED PROGRAM

Chairman HAYDEN. Are there any comments on that?

Commissioner DOMINY. I would like Mr. Palmer to discuss this item, Mr. Chairman.

Mr. PALMER. Mr. Chairman, the investigation program proposed in the Missouri River Basin for fiscal year 1961 finances going work only. No new investigations will be started. It will permit the orderly continuation of work already underway on the investigations listed in the justification.

In this program we anticipate no particular problems.

Chairman HAYDEN. In other words, they are going along in a normal way, you are not discharging anybody or hiring on any new help?

Mr. PALMER. On the investigation program this is exactly what we would contemplate. We will encounter a problem a little later when we talk about advance planning.

Senator YOUNG. Mr. Chairman, I wonder if I could ask a question or two at this time.

Chairman HAYDEN. Go ahead.

GARRISON DIVERSION UNIT

Senator YOUNG. I note that this item for the Garrison diversion unit as shown in the House report on the appropriation bill for 1961 for public works shows that the request of $445,000 for continuation of advance planning on the Garrison diversion unit has been reduced to $225,000. The report of the House says:

HOUSE REDUCTION

Studies undertaken to date on this unit indicate that in order to achieve even minimum economic feasibility the project will have to be radically altered from the originally authorized plan. It has been submitted again to the legislative committee for reauthorization, although the Bureau of the Budget has refused to recommend favorable action on it because of its marginal economics. Under these circumstances, the committee feels that it is entirely appropriate to reduce the level of expenditures substantially until a final determination has been made as to whether this project should proceed or be abandoned.

Mr. Chairman, I wonder if these gentlemen care to comment.

Commissioner DOMINY. Yes, I would like to comment on that, Senator Young. We do recognize that the Garrison diversion unit on the Missouri River Basin, although technically authorized by the Flood Control Act of 1944, does require reconsideration and reauthorization by Congress for two basic reasons; one being that we need to modify the application of the 1890 act right-of-way reservation to fit an area such as this. We doubt very seriously that the Congress intended that we should move in to a settled area and build a canal that practically takes a man's entire farm if he happens to be in the canal alinement under the 1890 right-of-way reservation without reimbursement to him in any way particularly when he is not even in

the irrigation district, just because the canal crosses his area reaching some other lands benefited. We think that we ought to pay for that right-of-way the same as we would if the 1890 right-of-way reservation was not in existence in that area.

CHANGED POINT OF DIVERSION

The second problem is, we have changed the point of diversion as it was originally contemplated in the 1944 Flood Control Act and are including some land not previously earmarked as part of the Garrison diversion.

It is for these reasons that we are back to Congress for reauthorization consideration. But because it was technically authorized within the Missouri River Basin, we did believe that the principle that advance planning not be undertaken until final authorization should not hold in this instance. We certainly believe that the Congress intended in authorizing the 1944 Flood Control Act that North Dakota would have substantial blocks of irrigated lands, as was proposed in the original Senate Document 191, which was the basis for presenting the whole plan to the Congress to offset the fact that North Dakota is providing the storage space for the flood control benefits for the downstream areas and substantial acreages of North Dakota in the river bottoms, where their best land lays, has gone into storage reservoir space.

PRIMARY PURPOSE

Senator YOUNG. But irrigation was as important a part of the plan as was the navigation and flood control and hydroelectric power generation, wasn't it?

Commissioner DOMINY. Well, I think the Senator is too modest. I think irrigation was the primary purpose of the 1944 Flood Control Act and irrigation all the way through was referred to as having precedence in that development.

Senator YOUNG. I am glad to hear you say that. The House report speaks about the feasibility of this project, that there is a question of the feasibility, based somewhat on the Bureau of the Budget action. How does the Bureau of Reclamation feel about that? Is it true that you plan to have a report to Congress dealing with this problem of feasibility soon?

Commissioner DOMINY. Yes, sir. Our views in the Bureau of Reclamation and the Department of the Interior as to the appropriateness of the Garrison River unit as a member of the family of units on the Missouri River Basin project plan remains unchanged and we have submitted a report to the Congress supporting the unit.

The Bureau of the Budget has permitted us to submit that report but, as you have noted and as the House committee notes, they have not endorsed in full measure the report as we submitted it and they do have some questions which they think Congress should properly consider in considering this project for reauthorization.

DEFINITE PLAN REPORT

Senator YOUNG. Do you not plan to have a further report in the future, based on later studies of feasibility?

Mr. PALMER. There is a report based on the initial project of 250,000 acres. There will be definite planning reports prepared as this study progresses. The money that is requested in the budget is to complete the definite plan report for the various units of the project.

There is now a report essential for the Congress to consider the Garrison diversion plan as it is now before the Congress. Definite plan reports are in process and should be completed as scheduled.

Senator YOUNG. There is not any question, then, in the mind of you people representing the Bureau of Reclamation as to the feasibility of the project?

Commissioner DOMINY. No, sir.

Senator YOUNG. And if because of the action of the House it be delayed, that will delay the program?

Commissioner DOMINY. Well, as to whether it would ultimately actually delay the project would depend, of course, on how soon this reauthorization was approved and how soon the construction money could be provided to include this in the construction program.

I can only say, Senator Young, that any of this advance planning work that we fail to do as programed in fiscal 1961 would ultimately have to be done in advance of actually going ahead in construction on the Garrison diversion unit.

Senator YOUNG. Is your program geared now as to investigation based on $445,000 as to your personnel and all other requirements——

Commissioner DOMINY. Yes, sir; and if you will note, in an item of this type practically all of it is personal services, and a reduction would require moving trained and experienced people to other locations or terminate them, if we don't have other work that we could place them on.

Senator YOUNG. Trained people you have had on the job now for many years?

Commissioner DOMINY. That is right, sir.

Senator YOUNG. Thank you.

BUDGET AMOUNT FOR ADVANCE PLANNING

Chairman HAYDEN. I will include in the record the justifications for the budget program of $1,344,000 for "Advance planning" for various units of the Missouri River Basin project.

(The justification follows:)

CONSTRUCTION AND REHABILITATION—ADVANCE PLANNING

Summarized financial data

Total obligations, fiscal year 1960		[1] $1,152,448
Allotment, fiscal year 1961	$1,344,000	
Total obligations		1,344,000

[1] Previously included in Missouri River Basin investigation program.

Purpose of program.—Subsequent to authorization of a Bureau of Reclamation project, additional detailed studies are generally required to refine the findings of the feasibility report and evolve a definite plan of development prior to start of construction. The major portion of the work consists of the collection of final design data, the preparation of final designs and specifications and completion of the definite plan report. It also includes negotiations with local interests leading to execution of repayment contracts. This advance planning program will provide funds for detailed preconstruction studies on authorized divisions and units of the Missouri River Basin project to prepare those proposed developments for

start of construction. During fiscal year 1961 advance planning will be under way on the following divisions and units:

CRAZY HORSE, TOWER, GREENWOOD, AND YANKTON UNITS, SOUTH DAKOTA

Location and description.—The Crazy Horse, Tower, and Greenwood units are located along the Missouri River downstream from the Fort Randall Dam in southeastern South Dakota. The Yankton unit is located immediately below the Gavins Point Dam. Each of these units will involve construction of a pumping plant and a system of canals, laterals, and drains. The four units would provide a full water supply for 8,544 acres of new land.

Authorization.—Flood Control Acts of 1944 and 1946.

Cost of investigations

Total estimated cost preconstruction planning		$184,000
Estimated cost to June 30, 1960		34,125
Fiscal year 1961 program		110,000
Planning allocation	$109,400	
Stores on hand, etc	600	
Balance to complete		39,875
Total estimated unit cost (4 units)		2,648,000

Fiscal year 1961 program.—The fiscal year 1961 program will provide for completion of the detailed land classification work, geologic and materials investigations, and water supply and hydrologic studies. Economic analyses and preparation of designs and estimates will be underway with the objective of completing the definite plan report in fiscal year 1962.

Justification.—These units are located in a predominately agricultural area. The average rainfall during the growing season varies from 11 to 15 inches per year and as a result crops are limited largely to wheat and small grains. Crop yields are generally low and crop failures due to drought are not uncommon. Irrigation would permit growing corn and forage crops to support an expanded livestock industry. This would stabilize the economy of the entire area.

GARRISON DIVERSION UNIT, NORTH DAKOTA-SOUTH DAKOTA

Location and description.—This unit is located principally in the central and eastern portions of North Dakota, with a small segment extending into northeastern South Dakota near the James River. The current plan of development for this unit involves the construction of a pumping plant on the Garrison Reservoir and a canal to convey water to a regulating reservoir located on the drainage divide between the Souris, James, and Sheyenne Rivers. Water should be released from this reservoir into a system of canals, pumping plants, and laterals to serve 250,000 acres of presently dry-farmed land. Future expansion of the unit to include additional land at a later date may prove desirable.

Authorization.—Flood Central Acts of 1955 and 1946.

Cost of investigations

Total estimated cost preconstruction planning		$6,416,000
Estimated cost to June 30, 1960		4,955,518
Fiscal year 1961 program		450,000
Planning allocation	$445,000	
Stores on hand, etc	5,000	
Balance to complete		1,010,482
Total estimated project cost		[1] 160,000,000

[1] Does not include Jamestown Dam and Reservoir already constructed.

Fiscal year 1961 program.—A report demonstrating the feasibility of the unit has been completed and detailed preconstruction studies leading to definite plan reports on the various service areas are underway. During fiscal year 1961 these studies will be continued with the objective of completing definite plan reports for the Oakes area and the LaMoure section by the end of fiscal year 1961 and for the Warwick-McVille and Karlsruhe areas by the end of fiscal year 1962.

Justification.—This unit is located in the northeastern Great Plains area where the climate is semiarid and the existing agricultural economy is based on dry-farming and livestock raising. During almost every year crop production is limited by lack of rainfall during July and August and during drought years,

crop failures and losses to the livestock industry are disastrous to the economy of a large area. Diversified agricultural operations that would be possible under irrigation would contribute materially to stabilizing farm income and the local economy. The rapidly developing recognition of the value of irrigation has been demonstrated in this portion of North Dakota by the prompt organization of five irrigation districts, by urgent requests from both the conservancy districts and the irrigation districts for negotiation of repayment contracts, and by substantial growth of irrigation where the limited water supply will permit. Furthermore, the construction of this unit also is needed to compensate the State of North Dakota for the loss of production on some 566,000 acres within the State that have been or will be inundated by main stem reservoirs.

JEFFERSON UNIT, MONTANA

Location and description.—This unit is located along the Jefferson River in Beaverhead, Madison, Jefferson, and Broadwater Counties in southwestern Montana. Storage for the unit would be provided by Reichle Dam, an earth-fill and rock-fill structure on the Beaverhead River, a tributary of the Jefferson River. An extensive canal system with related laterals and drains would be required to deliver a full water supply for 47,500 acres of new land and a supplemental supply for 15,100 acres of presently irrigated land.

Authorization.—Flood Control Acts of 1944 and 1946.

Cost of investigations

Total estimated cost preconstruction planning		$922,000
Estimated cost to June 30, 1960		326,102
Fiscal year 1961 program		337,000
Planning allocation	$336,000	
Stores on hand, etc	1,000	
Balance to complete		258,898
Total estimated project cost		59,272,000

Fiscal year 1961 program.—This program will provide for continuation of economic, engineering, and hydrology studies already underway and for the initiation of foundation drilling operations at the major structure sites, and assembly of design data for the dam and major canals. The definite plan report is scheduled for completion in fiscal year 1963.

Justification.—The Jefferson unit is located in an area of deficient precipitation subject to climatic extremes where irrigation is essential to agricultural production over a long period. Existing irrigation, for the most part, has evolved through private enterprise and the simple and less costly storage possibilities have been developed. At the same time streamflows have been overappropriated and most of the land under irrigation is in need of supplemental water to assure optimum production. The need for irrigation developments in this area is evidenced by a static population, crop yields fluctuating with climatic variations, and an unstable farm income. The Jefferson unit would permit diversification of farm crops, more intensive use of the land and stabilization of the area's agricultural production. In addition, periodic floods of the Jefferson River and its tributaries have caused extensive damage to farmland and communication, transportation facilities and other improvements in the area. Reichle Reservoir would aid materially in controlling the floodflows of the Jefferson River.

OAHE UNIT, SOUTH DAKOTA

Location and description.—Oahe unit is located in eastern South Dakota with the greater portion of the land lying within the James River valley in Spink, Brown, Day, and Marshall Counties. The remainder of the unit lies along the Missouri River in Sully County. The current plan is to irrigate approximately 554,000 acres of new land with water diverted from Oahe Reservoir now being constructed by the Corps of Engineers on the Missouri River. The diversion works and water supply system will consist of a pumping plant of about 3,700 cubic feet per second capacity lifting the water about 130 feet at Oahe Reservoir, the Pierre Canal about 39 miles long leading to Blunt Reservoir, and several main canals totaling 292 miles leading from Blunt Reservoir to the various main areas of the unit. Several other reservoirs are included in the system for additional regulation of flows to meet peak irrigation demands.

Authorization.—Flood Control Acts of 1944 and 1946.

Cost of investigations

Total estimated cost preconstruction planning		$6,592,000
Estimated cost to June 30, 1960		4,390,190
Fiscal year 1961 program		20,000
Planning allocation	$18,000	
Stores on hand, etc	2,000	
Balance to complete		2,181,810
Total estimated project cost		583,141,000

Fiscal year 1961 program.—By the end of the current fiscal year the unit report demonstrating the feasibility of the unit is to be completed. That report is to be released to the local interests to permit them to formulate their opinions and desires before undertaking more detailed investigations. The funds for fiscal year 1961 will be used for any necessary liaison and discussions with the local interests and the State agencies.

Justification.—The Oahe unit is located in an area of low and variable rainfall with resulting unstable yields. At various times, severe droughts have occurred which seriously injured the economy of the area. Irrigation of the land of this unit will change the agricultural pattern from a predominantly small grain and livestock farming operation to a more diversified farming of feeder and fattening livestock, dairying, and a wider variety of cash crops which in itself will contribute toward economic stability. The increased production of livestock feeds will permit livestock herds to be maintained through drought periods. The benefits resulting from the increased irrigation production will in turn result in increased retail, wholesale, and industrial activities of the towns and cities extending well beyond the boundaries of the Oahe unit as well as on the farms within the unit.

CEDAR RAPIDS DIVISION, NEBRASKA

Location and description.—The Cedar Rapids division comprises irrigable lands in the valley areas of the Cedar River and along the north side of the main Loup River extending about 10 miles downstream from the mouth of the Cedar River, in central Nebraska. Potential features of the division include a dam and reservoir, a diversion dam and associated works, several pumping plants, and a comprehensive system of canals and laterals required to furnish irrigation water to about 35,000 acres of high-quality land. Other potential benefits include recreation, fish and wildlife protection and propagation, and possibly a small amount of flood control.

Authorization.—Flood Control Acts of 1944 and 1946.

Cost of investigations

Total estimated cost preconstruction planning		$748,000
Estimated cost to June 30, 1960		315,302
Fiscal year 1961 program		262,000
Planning allocation	$252,800	
Stores on hand, etc	9,200	
Balance to complete		170,698
Total estimated project cost		23,658,000

Fiscal year 1961 program.—The funds for fiscal year 1961 will be used for topographic and detailed land classification surveys; preparation of designs and estimates; agricultural, economic, and hydrologic studies; and subsurface exploration work. The definite plan report is to be completed in fiscal year 1963.

Justification.—The Cedar Rapids division is located in an area where the average precipitation is about 24 inches per year. This rainfall varies widely and the precipitation during the growing season is often insufficient to mature the crops. During extended drought periods such as occurred during recent years, complete crop failures are common. As a result there is a growing realization among the local interests of the necessity for a permanent irrigation agriculture which will stabilize farm income and avoid the wide fluctuations in the local economy that have occurred in the past.

GLEN ELDER UNIT, KANSAS

Location and description.—The Glen Elder unit is located on the Solomon River in Mitchell, Cloud, and Ottawa Counties, Kans. The plan of development proposes Glen Elder Dam at a site on the river immediately upstream and adjacent to the western boundary of the town of Glen Elder. A system of canals and laterals would deliver the water to some 22,000 acres of project lands along both sides of the river extending downstream from Glen Elder to near Delphos, Kans.

Authorization.—Flood Control Acts of 1944 and 1946.

Cost of investigations

Total estimated cost preconstruction planning		$650,000
Estimated cost to June 30, 1960		371,538
Fiscal year 1961 program		134,000
Planning allocation	$133,000	
Stores on hand, etc	1,000	
Balance to complete		144,462
Total estimated project cost		57,222,000

Fiscal year 1961 program.—This program will provide for completion of the topographic mapping of the unit lands, continuation of land classification surveys and hydrologic studies, and initiation of agricultural economic studies. The definite plan report is scheduled to be completed in fiscal year 1963.

Justification.—On numerous occasions in the past, floods of the Solomon River have caused extensive damage to towns, utilities, crops, and lands along the river. Damages in the valley resulting from the July 1951 flood alone were estimated at over $16 million. Glen Elder Reservoir is the key facility of the flood control system on the Solomon River and, when operated in conjunction with the existing Kirwin and Webster Reservoirs, will eliminate the greater portion of the flood threat to the Solomon River Valley.

Glen Elder Reservoir also would provide storage of water for irrigation. As in other Great Plains areas, the climate which produces flooding conversely deprives the area of moisture in critical crop-growing periods. Although dryland farming in the unit area produces abundantly with adequate moisture, intermittent droughts and poor distribution of rainfall have impaired the predominantly agricultural economy and resulted in instability and insecurity. More dependable crop yields sustained at higher levels through the introduction of irrigation will lend stability to the area. It will permit diversification in farm operations, a balanced livestock program and encourage the adoption of soil conservation practices.

KANOPOLIS UNIT, KANSAS

Location and description.—The Kanopolis unit is located in north-central Kansas on the Smoky Hill River in Ellsworth, McPherson, and Saline Counties. The water supply for the unit will be obtained from the existing Kanopolis Reservoir constructed by the Corps of Engineers. The unit will involve construction of the canals, laterals, and drains required to provide a full water supply for some 16,500 acres of land.

Authorization.—Flood Control Acts of 1944 and 1946.

Cost of investigations

Total estimated cost of preconstruction planning		$433,525
Estimated cost to June 30, 1960		432,199
Fiscal year 1961 program		1,326
Planning allocation	$1,000	
Stores on hand, etc	326	
Balance to complete		
Total estimated project cost		11,032,000

Fiscal year 1961 program.—The definite plan report for this unit is to be completed during fiscal year 1960. The fiscal year 1961 program will provide for miscellaneous studies and continued liaison with the local interests.

Justification.—As in many areas of the Great Plains, the lands of the Kanopolis unit produce abundantly under dryland farming in those years when there is suffi-

cient rainfall during the critical growing period. However, the precipitation during the summer months is often insufficient to fully mature the crops. During extended drought periods, such as occurred recently throughout the Great Plains area, complete crop failures are common. As a result, farm income and the local economy is subject to wide fluctuations. Introduction of irrigation would provide stability by permitting sustained crop production, diversification of farm operations, and a balanced livestock program.

NARROWS UNIT, COLORADO

Location and description.—The Narrows unit is located on the South Platte River in Weld, Morgan, Washington, Logan, and Sedgwick Counties. The key feature of the unit will be the Narrows Dam and Reservoir on the South Platte 8 miles west of Fort Morgan, Colo. This reservoir will conserve floodflows and return flows from upstream developments to provide supplemental water for some 225,000 acres of currently irrigated land suffering from chronic shortages and, ultimately, a full supply for some 30,000 acres of new land.

Authorization.—Flood Control Acts of 1944 and 1946.

Cost of investigations

Total estimated cost preconstruction planning		$1, 178, 000
Estimated cost to June 30, 1960		1, 081, 954
Fiscal year 1961 program		50, 000
Planning allocation	$48, 800	
Stores on hand, etc	1, 200	
Balance to complete		46, 046
Total estimated project cost		36, 956, 000

Fiscal year 1961 program.—A draft of a report on this unit was prepared in June 1951 which was based on reregulating the return flows from the potential Blue-South project. The city of Denver was subsequently granted a right to divert water from the Blue River which precludes development of the Blue-South Platte project and invalidates many of the studies of the Narrows unit. A special report was prepared in 1958 to temporarily terminate the work but, in view of the renewed interest on the part of the Colorado Water Conservation Board and local interests, detailed investigations were resumed in fiscal year 1960 to reappraise the unit in light of existing conditions. The program for fiscal year 1961 will provide for continuation of this work with the objective of completing the definite plan report in fiscal year 1962.

Justification.—One of the most important functions of the Narrows Dam and Reservoir is to capture and regulate the spring floodflows and the return flows from large areas in the upper portion of the South Platte River Valley which are served largely by importation of water from the Colorado River Basin. The Colorado-Big Thompson project now imports an average of 257,700 acre-feet of water annually and importations by the city of Denver are increasing. At the present time the floodwaters and a substantial part of the return flows from these upstream developments cannot be used within the South Platte River Basin for lack of storage. It is estimated some 810,000 acre-feet of water left the State of Colorado in 1942. Narrows Dam and Reservoir would make it possible to effectively utilize this water within the State. It also would provide needed flood protection for communities and farmland downstream from the reservoir

ADVANCE PLANNING

Commissioner DOMINY. Yes, Mr. Chairman; we have kind of gotten ahead of the record here in that Garrison diversion item, that was under advance planning.

Chairman HAYDEN. Will you comment briefly on each unit, included in the advance planning program?

Commissioner DOMINY. Do you want me to do that now, or put it in the record?

Chairman HAYDEN. Put it in the record.

PREPARED STATEMENT

Commissioner DOMINY. Very good; we will put it in the record. (The information requested follows:)

MISSOURI RIVER BASIN PROJECT ADVANCE PLANNING

The purpose of this program is to prepare authorized units of the Missouri River Basin project for start of construction. This involves collection of final design data, preparation of final designs and specifications, repayment negotiations, and completion of the definite plan report. At the present time these advance planning studies are underway on 10 units and divisions of the project. By the end of this fiscal year definite plan reports are scheduled to be completed on three units; namely, the 6,360-acre Chestnut Valley unit near the city of Great Falls, Mont.; the Hardin unit which will utilize storage in the proposed Yellowtail Reservoir for the irrigation of approximately 43,000 acres in Big Horn County, near the city of Hardin; and the Kanopolis unit in north-central Kansas, which will consist of a multipurpose dam and reservoir and irrigation facilities for 16,500 acres.

During fiscal year 1961 detailed preconstruction studies will be continued on six units and divisions and small amounts of funds will be required for liaison and negotiation with local interests on two other units. One of the major items in the fiscal year 1961 program will be the Garrison diversion unit. The original plan of development for this unit contemplated the diversion of water from the existing Garrison Reservoir for the irrigation of about 1 million acres in central North Dakota. Recent considerations, including discussions with local interests, resulted in a decision to confine the unit to a smaller area of about 250,000 acres which could be expanded at a later date to encompass the remainder of the unit. A report demonstrating the feasibility of the 250,000-acre development has been submitted to Congress to support a recommendation of the modification of the existing authorization. That report points out, however, that any one of several plans to serve 250,000 acres would be physically and economically justified, and could be constructed as a self-contained unit. The detailed preconstruction studies now underway will determine the areas to be included in this 250,000 acre development and the final plan for serving those areas. This work which will require $445,000 in fiscal year 1961 also is a necessary prerequisite to negotiation of repayment contracts.

Another major item in the advance planning program is the Jefferson unit located on the Jefferson River in southwestern Montana. This unit will involve a multipurpose dam and reservoir and an extensive canal and lateral system to serve a total of about 63,000 acres of land. The schedule for this unit, which will require $336,000 in fiscal year 1961, provides for the completion of the definite plan report by the end of fiscal year 1963.

The budget for the advance planning activity also includes $252,800 for continuation of detailed studies on the Cedar Rapids division in Kansas. This division will involve a dam and reservoir, diversion works, several pumping plants and a system of canals and laterals to supply irrigation water to about 35,000 acres of land along Cedar River and the main Loup River in central Nebraska. The definite plan report on this division also is scheduled to be completed in fiscal year 1963.

The Glen Elder unit, located on the Solomon River, near the town of Glen Elder, involves a multipurpose dam and reservoir and irrigation facilities to serve some 22,000 acres of land. Because of the pressing need for flood control along the Solomon River, major emphasis is being placed on the preconstruction work on the dam and reservoir with the objective of completing a definite plan report on this phase of the unit in the spring of 1961. This work plus the continuation of advance planning on the irrigation facilities will require $133,000 in fiscal year 1961.

Detailed preconstruction studies on the Crazy Horse, Tower, Greenwood, and Yankton units in South Dakota also will be underway in fiscal year 1961 and will require an appropriation of $109,400. The first three units are located along the Missouri River downstream from Fort Randall Dam and the Yankton unit is immediately below Gavins Point Dam. The definite plan report on these four units which encompass a total of about 8,500 acres is scheduled to be completed by the end of fiscal year 1962.

The Narrows unit, located on the South Platte River near the town of Fort Morgan, Colo., consists of a multipurpose dam and reservoir which will conserve return flows from upstream developments to provide supplemental water for some

225,000 acres. The budget for fiscal year 1961 includes $48,800 for continuation of advance planning work on this unit with the objective of completing the definite plan report in fiscal year 1962.

By the end of the current fiscal year, a report demonstrating the engineering and economic feasibility of the Oahe unit, South Dakota, is scheduled to be completed. This report will be released to the local interests to aid them in formulating their desires and opinions before undertaking more detailed investigations. The fiscal year 1961 budget includes $18,000 for any liaison and discussion with the local interests and State agencies.

The budget also contains $1,000 for the Kanopolis unit on which the definite plan report will be completed during the current fiscal year. These funds will be used for continued liaison with the local interests.

Participating Agencies

Chairman Hayden. The budget program includes the following sums for the participating agencies:

Fish and Widlife Service, $280,000;
Geological Survey, $1,890,000;
Bureau of Indian Affairs, $196,400;
Bureau of Land Management, $249,600;
Bureau of Mines, $140,000; and
National Park Service, $244,000.

The justifications and statements in support of these requests will be included in the record.

(The information referred to follows:)

Fish and Wildlife Service—Construction and Rehabilitation

Summarized financial data

Total obligations to June 30, 1959		$4,182,755
Allotment, fiscal year 1960	$233,025	
Prior year balance available	212	
Total obligations, fiscal year 1960		233,237
Allotment, fiscal year 1961	280,000	
Total obligations, fiscal year 1961		280,000

Justification

A total of $280,000 is requested for investigations by the Bureau of Sport Fisheries and Wildlife in the Missouri River Basin. Funds in this amount will enable the Bureau to bring its program more into balance with the programs of the water-resource development agencies in the basin. The Bureau will be able to carry out more effectively the added responsibilities placed on it by the Fish and Wildlife Coordination Act as amended in 1958 (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The investigative program of the Bureau of Sport Fisheries and Wildlife in the Missouri River Basin is not related solely to the general investigations program of the Bureau of Reclamation. In addition to the general investigations program of the Bureau of Reclamation, this program must also service the construction and operation program of that Bureau and the planning and construction programs of many agencies and organizations. These are: the Corps of Engineers, the Department of Agriculture, the licensees and permittees of the Federal Power Commission, applicants for loans under the Small Reclamation Projects Act, applicants for permits from the Forest Service for rights-of-way for water projects, and private organizations seeking to build their own water-use projects with Federal assistance. Under its investigative program, the Bureau of Sport Fisheries and Wildlife studies the water-use projects of these various agencies and organizations to determine their effects on fish and wildlife resources and to recommend measures for inclusion in project plans to protect, develop, and improve fish and wildlife resources. These biological studies constitute an integral part of Federal planning

for overall development of the water and related land resources of the Missouri River Basin.

The Missouri River basin contains a greater variety and abundance of fish and wildlife than any comparable area in the United States. Approximately one-half of the elk, two-thirds of the antelope, one-half of the bighorn sheep, and most of the remaining grizzly bears in the Nation are found here. The basin contains high populations of deer, grouse, and pheasants and embraces the most important waterfowl-producing area in the United States. Some of our most important trout streams, including the world-renowned Madison River, are located in the upper reaches of the Missouri River system.

Public interest in hunting and fishing is high throughout the basin. These sports provide the major recreational pursuits of a large proportion of the population. Sales of hunting and fishing licenses have nearly doubled since 1940 and now stand at about 4 million. The hunting and fishing opportunities here attract sportsmen from across the Nation who provide substantial income to the basin.

The broad development of land and related land resources throughout the basin by the Bureau of Reclamation, Corps of Engineers, Department of Agriculture, and numerous non-Federal agencies is causing extensive changes in fish and wildlife habitat. Some changes are beneficial, such as the provision of desirable reservoir fishing or the creation of improved pheasant habitat through irrigation development. Other changes are harmful, such as the dewatering of high-quality trout streams or the inundation of essential elk range. The Bureau of Sport Fisheries and Wildlife is responsible for studying each project development and assisting the project construction agency in devising measures for incorporation in project plans to prevent damages and provide benefits to fish and wildlife resources.

The largest single endeavor in fiscal year 1960 will continue to be in connection with the proposed Garrison diversion unit of the Bureau of Reclamation. This project involves the diversion of nearly 9,000 cubic feet per second of water from the Garrison Reservoir to irrigate almost a million acres of land in North and South Dakota. Ten national wildlife refuges and some of the most productive waterfowl-breeding habitats in the Nation are located in the project area. The Department report on this project includes as part of the overall plan the development of some 62 fish and wildlife areas ranging in size from 50 to over 15,000 acres which are designed primarily to provide compensatory waterfowl-breeding habitats in place of that being lost through construction of other project features. During fiscal year 1961, the Bureau of Sport Fisheries and Wildlife will continue detailed biological and engineering investigations to firm up the development plans for various of these fish and wildlife areas.

Other major studies of Bureau of Reclamation developments will be made in connection with the Oahe unit in South Dakota, various units of the Three Forks division in Montana, and the Yellowstone division in Montana. The Oahe unit will provide irrigation for about 750,000 acres of land, much of which is located in the Nation's most famous pheasant range where heavy populations of these birds presently occur. Plans for a number of fish and wildlife areas are being developed for inclusion in the overall development plans for this unit. The Three Forks area provides superb trout fishing in its Jefferson, Madison, and Gallatin Rivers which combine at Three Forks, Mont., to form the Missouri River. The Madison River is widely known as a top-quality trout stream, and the Gallatin, Big Hole, and Jefferson Rivers provide equally good fishing. This Bureau is reviewing various development proposals in the Three Forks area by the Bureau of Reclamation to determine which will be most desirable from a fish and wildlife standpoint. Basin investigations in the Yellowstone division include the Absaroka and Yankee Jim project proposals in which fish and wildlife groups in Montana are particularly concerned.

Major studies of Corps of Engineers will include those related to the Oahe Reservoir in North and South Dakota, the Big Bend Reservoir in South Dakota, the Stockton Reservoir in Missouri, and the Kasinger Bluff Reservoir in Missouri. Studies will be directed toward the development of measures for inclusion in project plans to protect and improve fish and wildlife resources.

A number of lesser investigations will be conducted in connection with other project developments of the Corps of Engineers and Bureau of Reclamation; small reclamation projects proposed under Public Law 984, 84th Congress; small watershed projects proposed under Public Law 566, 83d Congress, as amended; non-Federal hydroelectric power projects subject to Federal Power Commission license; and other miscellaneous projects.

These biological investigations will be conducted in close cooperation with the State fish and game agencies as provided for in the Fish and Wildlife Coordination Act.

Funds in the amount of $280,000 will be needed to accomplish this program during fiscal year 1961.

Bureau of Sport Fisheries and Wildlife

Missouri River Basin Studies

JUSTIFICATION

Fiscal Year 1961

Funds in the amount of $280,000 are required to permit needed studies of Federal and federally approved water resource development projects in those parts of the 10 Western States which comprise the Missouri River Basin. Funds in this amount will enable the Bureau of Sport Fisheries and Wildlife to bring its study program more nearly into balance with other water-resource development agencies in the basin. Added responsibilities imposed by enactment of the Fish and Wildlife Coordination Act in August 1958 can be carried out.

Responsibilities of the Bureau of Sport Fisheries and Wildlife extend to those proposed water development projects not yet authorized, authorized but not constructed, and under construction but not substantially completed. Agencies whose programs are involved include not only the Bureau of Reclamation, but also the Corps of Engineers, Department of Agriculture, licensees and permittees of the Federal Power Commission, applicants for Federal grants and loans under the Small Reclamation Projects Act, applicants for Forest Service permits for rights-of-way for water projects and private organizations seeking to build their own water projects with Federal assistance.

The Missouri River Basin contains a greater variety and abundance of fish and wildlife than any comparable area in the United States. It is believed that approximately one-half of the elk, two-thirds of the antelope, one-half of the bighorn sheep, and most of the remaining grizzly bears in the Nation are found here. The basin contains large populations of deer, grouse, and pheasants and embraces the most important waterfowl-producing area in the United States. Some of our most productive trout streams, including the world renowned Madison River, are located in the upper reaches of the Missouri River system.

Public interest in hunting and fishing is high throughout the basin. These sports provide the major recreational pursuits of a large proportion of the population. Sales of hunting and fishing licenses have nearly doubled since 1940 and now stand at about 4 million. The hunting and fishing opportunities here attract sportsmen from across the Nation who provide substantial income to the basin.

The Garrison diversion unit, North Dakota and South Dakota, continues to be of major concern. Some of the Nation's finest waterfowl-producing areas are involved in the area to be irrigated. The Service is preparing detailed plans for waterfowl management areas designed to compensate for losses in breeding habitat which will be caused by project construction.

Other major studies of Bureau of Reclamation developments will be made in connection with the Oahe unit in South Dakota and various units of the Three Forks division in Montana. The Oahe unit will provide irrigation for more than 750,000 acres of land, much of which is located in the Nation's most famous pheasant range where heavy populations of these birds presently occur. Plans for a number of fish and wildlife areas are being developed for inclusion in the overall development plans for this unit. The Three Forks area provides superb trout fishing in the Jefferson, Madison, and Gallatin Rivers which combine at Three Forks, Mont., to form the Missouri River. Through close cooperation with the Bureau of Reclamation, plans for the various units in this division include substantial provisions for the protection and improvement of these outstanding fishery resources.

Major Corps of Engineers' projects in various stages of planning or construction which require attention by the Bureau in compliance with the Fish and Wildlife Coordination Act include the Kasinger Bluff, Pomme de Terre, and Stockton Dam and Reservoir projects in Missouri; Milford, Perry, and Wilson Reservoir projects, Kansas; Big Bend Reservoir, S. Dak; and slackwater navigation studies for the Missouri River below Sioux City.

The proposed increase in funds relative to fiscal year 1960 will permit a review of the Yellowtail unit with special reference to the layout and construction of a cold-water fish hatchery, a more inclusive study of the Cove, Huntley exten-

sions, and other units of the Yellowstone division, study of the Shadehill unit in South Dakota, a study of bank stabilization along the Missouri River, and studies of the Grand River Basin in Iowa and Missouri. The latter offers particularly good opportunities for fish and wildlife development.

A reduction in the study program of the Fish and Wildlife Service was necessitated by the reduced appropriation in fiscal year 1959. This has resulted in delays in report preparation which, in turn, have caused delays on the part of project construction agencies. The increase requested herein should aid materially in expediting the preparation of reports of improved quality and returning the entire water resources program in the basin into a more proper balance with the programs of the various construction agencies.

Geological Survey—Construction and Rehabilitation

Summarized financial data

Total obligations to June 30, 1959		$33,844,268
Allotment, fiscal year 1960	$1,659,450	
Prior year balance available	10,492	
Total obligations, fiscal year 1960		1,669,942
Allotment, fiscal year 1961	1,890,000	
Total obligations, fiscal year 1961		1,890,000

JUSTIFICATION

The objectives of the Geological Survey under the departmentwide Missouri River Basin project are the collection, analysis, and interpretation of data on the water and mineral resources, and the preparation of topographic and geologic maps and reports, that are essential for planning the orderly development and utilization of the resources of the basin. Such information is needed by the Bureau of Reclamation and other agencies of the Government, as well as by the States and private industry. This work, while comparable to that financed by directly appropriated Survey funds, is oriented toward the specific needs of these development agencies.

The estimate for fiscal year 1961 is $1,890,000, an increase of $220,058 over 1960.

	1959	1960	1961	Increase
1. Topographic surveys and mapping	$739,650	$970,604	$1,100,000	$129,396
2. Geologic and mineral resource surveys and mapping	54,591	57,944	59,000	1,056
3. Water resources investigations	461,267	641,394	731,000	89,606
Totals	1,255,508	1,669,942	1,890,000	220,058

1. *Topographic surveys and mapping.*—1959, $739,650; 1960, $970,604; 1961, $1,100,000.

The estimate for this activity for 1961 is $1,100,000, an increase of $129,396 over 1960.

The Geological Survey prepares special and standard quadrangle maps needed by the Bureau of Reclamation and other agencies engaged in the development of the Missouri River Basin. Such maps portray the character and relief of the terrain, the position and the size of the manmade features, and the location and extent of the surface water features.

Federal and State agencies in the basin have requested topographic quadrangle mapping for use in planning development programs and improvements, including: (*a*) Dams and reservoirs, (*b*) irrigation systems, (*c*) primary roads, (*d*) geologic and minerals investigations, (*e*) surface and groundwater studies, and (*f*) land management. These needs have been reviewed and approved by the Interior Department Missouri River Basin Field Committee.

The increase will provide an expansion in topographic mapping activities more nearly able to meet the pace of resource development in the Missouri River Basin. The great amount of terrain data provided by topographic maps makes them an essential first step for planning large resource development projects. The topographic mapping program is geared to the basin program as a whole. To keep the planning of these developments properly coordinated, the continuation of the mapping program at a level adequate to provide maps where required is critical.

During 1961 mapping operations under this program will be continued on approximately 26,000 square miles, and new mapping will be started on approximately 5,000 square miles. The selection of quadrangles to be mapped is based on the highest priority needs for mapping in areas proposed for development projects and is designed to reduce duplication by other agencies.

2. *Geologic and mineral resources surveys and mapping.*—1959, $54,591; 1960, $57,944; 1961, $59,000.

The estimate for this activity for 1961 is $59,000, an increase of $1,056 over 1960.

The program of geologic and mineral resources surveys and mapping under the Missouri River Basin project may be divided into two broad categories: (1) General service geologic mapping and investigations, and (2) investigations of the oil and gas resources of the basin.

General service geologic mapping and investigations are conducted mainly in areas where engineering projects are planned by the Bureau of Reclamation, or by State or private agencies. Information on the character of the terrain, the nature of the unconsolidated surficial deposits and the underlying rocks, and the location, extent, and physical and chemical properties of potential construction materials is essential to the planning of such projects.

The oil and gas investigations in the basin are concerned chiefly with the collection of data that will aid in the location and appraisal of these resources. Mineral fuel resources need to be developed along with the other resources of the basin if the full potential of the area is to be realized.

Plans for fiscal year 1961 are to continue geologic investigations of the Williston basin oil and gas fields; to continue geologic investigations in the Whalen-Wheatland area of Wyoming; and to prepare a final report on the geologic mapping and related investigations in the Great Falls area, Montana.

3. *Water resources investigations.*—1959, $461,267; 1960, $641,394; 1961, $731,000.

The estimate for this activity for 1961 is $731,000, an increase of $89,606 over 1960.

One of the primary problems relating to the comprehensive development of the Missouri River Basin is the availability of water. The amount of water available to serve the multiple demands, including irrigation, municipal and industrial use, hydroelectric power, and irrigation, varies widely both as to time and place. Only through the collection of basic information on the flow of streams, both as to quantity and quality, can the available water resources be evaluated. Thus, long-term records, showing the changes resulting from the wide fluctuations in precipitation and from manmade alterations, are essential to the orderly planning of basin development.

Information on the occurrence, quality, and recoverability of groundwater is also essential as a part of basin planning. In some areas, groundwater offers a valuable source of primary supply or of supplemental supply to surface-water development. A knowledge of the interrelationship between surface and underground waters is essential to the evaluation of overall water availability—not only as to source of supplies, but also in connection with drainage of excess waters.

The quality of available water may be a controlling factor in its use for irrigation and for municipal and industrial supplies. The amount of dissolved minerals in surface waters varies widely, as does the quantity, and continuing records of chemical-quality characteristics are required for an evaluation of suitability for use for particular purposes. The amount of sediment carried by streams is an important consideration in the design of reservoir projects, as adequate storage space must be allocated for the accumulation of deposits. Records of sediment loads in streams are likewise required to evaluate the effects of improved land-use practices and the installation of sediment-control structures.

Basic water-resources data should be available in advance of planning for all water projects. Such information furnishes a sound basis for appraising the quantity and quality of the water supply, thereby reducing the likelihood of inadequate designs or excessive costs of construction and operation. The cost of obtaining adequate basic data is only a small fraction of overall basin development costs.

The funds requested for water resources investigations during fiscal year 1961 would provide for a moderate expansion of the program carried on in 1960 and restore it to approximately the same level as that for 1958. The 1960 program includes streamflow data at about 172 sites, sediment-load data at 23 sites, chemical-quality data at 64 sites, and ground-water investigations in 14 areas. The proposed 1961 program would include streamflow data at 190 sites, sediment-load data at 25 sites, chemical-quality data at 70 sites, and ground-water inves-

tigations in 15 areas. In addition, an investigation of the hydrology of a prairie pothole area would be started in order to determine the loss of water from marsh and pothole vegetation in North Dakota and South Dakota. Many potholes in this region (now one of the greatest waterfowl habitat on the continent) will be lost because of land leveling and construction of drainage systems associated with the Garrison diversion project. Because irrigation water will be used to flood certain lowlands to replace some of the potholes, it is necessary to know how much water will be required to meet seepage, evaporation, and transpiration losses.

STATEMENT IN SUPPORT OF THE 1961 BUDGET ESTIMATE OF THE GEOLOGICAL SURVEY—MISSOURI RIVER BASIN PROJECT

The Geological Survey's budget request under the Missouri Basin program for fiscal year 1961 totals $1,890,000, an increase of $220,058 over the amount available in fiscal year 1960.

The Geological Survey's work under this program conforms to the long-range objectives of the Survey and meets the needs of the Bureau of Reclamation and other action agencies for basic information in the specialized field of the Survey. This, of course, does not reduce the value of the information for its many other uses by those who ordinarily benefit from the Survey's products. The work is comparable to that which the Survey does under its regular programs.

The estimate includes $1,100,000 for topographic surveys and mapping, an increase of $129,396 over 1960. The funds will be used in the mapping of areas proposed for development projects. During 1961 topographic mapping operations will be continued on approximately 26,000 square miles, and new mapping will be started on approximately 5,000 square miles. The increase will provide an expansion in mapping activities to more nearly meet the pace of resource development in the Missouri River Basin.

The estimate includes $59,000 for geologic and mineral resource surveys and mapping, an increase of $1,056 over 1960. The information obtained by these investigations aids in the appraisal and development of the mineral, fuel, and petroleum resources of the basin; it also gives a basis for appraising the effects of the development of mineral resources and water, power, and related resources upon one another. Plans for fiscal year 1961 are to prepare a final report on the geologic mapping and studies in the Great Falls area, Montana, and to continue the geologic investigations of the Williston Basin oil and gas fields and the fuel resources in the Whalen-Wheatland area of Wyoming.

The estimate includes $731,000 for water resources investigations, an increase of $89,606 over 1960. Basic facts on the quantity, quality, availability, and distribution of water supplies are essential for the sound development and utilization of the water resources of the Missouri River Basin. The determination of the feasibility of development projects depends in large part upon this type of information. The primary concern is to obtain the water facts well in advance of the needs and before actual developmental changes take place. A small expansion in the investigational program is planned to meet the needs of the development agencies. This will make possible the collection of streamflow, sediment, and chemical-quality data at additional sites, and the investigation of ground water for another area.

BUREAU OF INDIAN AFFAIRS—CONSTRUCTION AND REHABILITATION

Summarized financial data

Total obligations to June 30, 1959		$2,991,801
Appropriation, fiscal year 1960	$174,037	
Prior year balance available	2,917	
Total obligations, fiscal year 1960		176,954
Appropriation, fiscal year 1961	$196,400	
Total obligations, fiscal year 1961		196,400

JUSTIFICATION

Approximately one-third of the Missouri River Basin investigation program for fiscal year 1961 will be devoted to work in relation to the Corps of Engineers' projects. The largest single item under this category is for completion of the range and soil survey at Fort Berthold Reservation which was started during the close of fiscal year 1959. The survey will be completed in fiscal year 1961. Another major undertaking and the one carrying highest priority will be for con-

tinuation of the work at Standing Rock in connection with the moving and reestablishment of families due to the flooding of lands in the Oahe Reservoir area. In addition to moving families and buildings this work will involve assistance in the building of houses, purchasing of lieu lands by individuals in the tribe, consolidation of landholdings by exchanges, sales, and purchases, programing of funds received from land sales for intangible damages and for rehabilitation purposes. The tribal land purchase program is expected to involve a million or more dollars. Work at Crow Creek and Lower Brule will be largely in connection with the Big Bend project. Appraisal will be made of lands in the Big Bend Dam and Reservoir area and lands needed for wildlife conservation purposes adjacent to the reservoir. Intangible damages likely to be claimed by the Indian people of these two Indian reservations, because of the building of the Big Bend Dam and flooding of lands in the Big Bend Reservoir, will be estimated.

Work relating to Bureau of Reclamation projects will be given somewhat greater emphasis in 1961 than was given during recent years. These funds will be spent largely at the Crow and Wind River Reservations. Investigations at Crow will be largely in connection with the Hardin irrigation unit. They will involve social-economic studies, landownership record work, leasing of trust land, and analysis of possible arrangements for handling Indian trust lands under the Hardin unit. The work at Wind River during 1961 will continue the land record and census work which has been underway for a year and one-half and service the economic study being made by the University of Wyoming under contract with the Bureau of Indian Affairs. Investigations in 1961 will be largely for engineering surveys on present and potential irrigation systems serving Indian trust lands and for soils, economics, landownership, and other data associated with irrigation projects on the reservation.

Increased attention will continue to be given during fiscal year 1961 to investigations directed to incorporating the benefits arising from Missouri River Basin projects into the economy of the reservations affected. The engineering and economic study at Fort Belknap is expected to be completed in 1961. Comprehensive surveys of human and physical resources and their future potentials will be continued at the Pine Ridge and Fort Peck Reservations. Work in fiscal year 1961 will be largely that of relating the findings of these studies to factors of Indian development and advancement, with the ultimate objective of assisting Indian people to become fully self-supporting and self-reliant in the social and economic fields. Similar programs will be initiated at the Crow and Blackfeet Reservations in fiscal year 1961.

STATEMENT BY VERN E. STEPHENS ON WORK TO BE PERFORMED IN THE MISSOURI RIVER BASIN BY THE BUREAU OF INDIAN AFFAIRS, FISCAL YEAR 1961

Approximately one-third of the Missouri River Basin investigation program for fiscal year 1961 will be devoted to work in relation to the Corps of Engineers' projects. The largest single item under this category is for completion of the range and soil survey at Fort Berthold Reservation which was started during the close of fiscal year 1959. The survey will be completed in fiscal year 1961. Another major undertaking and the one carrying highest priority will be for continuation of the work at Standing Rock in connection with the moving and reestablishment of families due to the flooding of lands in the Oahe Reservoir area. In addition to moving families and buildings this work will involve assistance in the building of houses, purchasing of lieu lands by individuals in the tribe, consolidation of landholdings by exchanges, sales, and purchases, programing of funds received from land sales for intangible damages and for rehabilitation purposes. The tribal land purchase program is expected to involve a million or more dollars. Work at Crow Creek and Lower Brule will be largely in connection with the Big Bend project. Appraisal will be made of lands in the Big Bend Dam and Reservoir area and lands needed for wildlife conservation purposes adjacent to the reservoir. Intangible damages likely to be claimed by the Indian people of these two Indian reservations, because of the building of the Big Bend Dam and flooding of lands in the Big Bend Reservoir will be estimated.

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economic study being made by the University of Wyoming under contract with the Bureau of Indian Affairs. Investigations in 1961 will be largely for engineering surveys on present and potential irrigation systems serving Indian trust lands and for soils, economics, landownership and other data associated with irrigation projects on the reservation.

Increased attention will continue to be given during fiscal year 1961 to investigations directed to incorporating the benefits arising from Missouri River Basin projects into the economy of the reservations affected. The engineering and economic study at Fort Belknap is expected to be completed in 1961. Comprehensive surveys of human and physical resources and their future potentials will be continued at the Pine Ridge and Fort Peck Reservations. Work in fiscal year 1961 will be largely that of relating the findings of these studies to factors of Indian development and advancement, with the ultimate objective of assisting Indian people to become fully self-supporting and self-reliant in the social and economic fields. Similar programs will be initiated at the Crow and Blackfeet Reservations in fiscal year 1961.

Bureau of Land Management—Construction and Rehabilitation

Summarized financial data

Total obligations to June 30, 1959	$4,111,317
Allotment, fiscal year 1960	207,675
Prior year balance available	3,070
Total obligations, fiscal year 1960	210,745
Appropriations, fiscal year 1961	249,600
Total obligations, fiscal year 1961	249,600

JUSTIFICATION

1. *Land classification, $118,600.*—Classification and inventory of the public lands precedes development work by the Bureau of Reclamation, and other agencies, in order that the necessary coordination of land and water uses can be accomplished. Field data gathered is compiled in narrative, graphic, tabular, and cartographic report form and copies are provided participating and interested agencies. Such reports facilitate the orderly development and disposition of public lands and provide important land use capability and suitability data, grazing capacity, recreation and wildlife, timber values, necessary to the proper integration of public lands with lands under other ownership.

Land classification fieldwork for 1961 will cover 740,000 acres in the Tongue River and upper and lower Yellowstone River Basin. Public domain lands are widely dispersed throughout this area and because of this scattered land pattern, these combined basins will be classified as isolated tracts.

2. *Cadastral survey, $131,000.*—The cadastral surveys are necessary to the basin program to provide accurate official boundaries by legal subdivision; for securing rights-of-way; for canals and reservoirs; the laying out of farm units; and to provide horizontal control for mapping. It is, therefore, necessary that the cadastral survey work proceed well in advance of the requirements of the development agencies. The 1961 program will provide for survey and resurvey of 288,000 acres, coordinated with the program of these agencies.

Bureau of Land Management

Statement for the Senate Subcommittee on Appropriations, 1961 Estimate for Missouri River Basin Project

The 1961 estimate on Missouri River Basin project under the appropriation, "Construction and rehabilitation, Bureau of Reclamation," includes $249,600 for Bureau of Land Management. That Bureau provides cadastral surveys and land classification required by the project.

Land classification, $118,600.—Lands are classified to determine the best use in order that the necessary coordination of land and water uses can be accomplished. These classifications facilitate the orderly development and disposition of public lands and provide important land use and capability and suitability data. The program for 1961 will cover some 740,000 acres in the Tongue River Basin and the upper Yellowstone River Basin. Priority will be given the latter

area because of its importance for recreation and the fact that much of the work can be processed on an area basis. This is much more economical and leads to greater acreage accomplishment than where the work has to be done on isolated tracts. Field work will begin in the Tongue River area which contains 201,200 acres of public domain. Reports on the North Platte River and the Great Divide Basins, totaling 5,540,464 acres of public domain, will be published.

Cadastral survey, $131,000.—The cadastral surveys are necessary to the basin program to provide accurate and official boundaries by legal subdivisions. The amount requested will meet minimum needs of the Bureau of Reclamation for cadastral surveys. The work includes resurveys associated with the development of water resources facilities, aids investigations and planning for dam and canal construction. In addition to this regular work a newly developed need has brought a request for surveys of specific reservoir areas. Because of the public pressure for full recreational use of completed reservoirs, it is necessary that cadastral surveys identify small legal subdivisions and boundaries of these reservoir areas. This determination is required before the Federal agencies can develop with State or local agencies suitable programs for the management of recreational facilities. Identification of boundaries provides a sound basis for a transfer of these recreation areas to local agencies for management.

Bureau of Mines—Construction and Rehabilitation

Summarized financial data

Total obligations to June 30, 1959	$1,853,484
Allotment, fiscal year 1960	122,850
Application of prior year funds	76
Total obligations, fiscal year 1960	122,926
Allotment, fiscal year 1961	140,000
Total obligations, fiscal year 1961	140,000

JUSTIFICATION

The Missouri Basin has entered a new era of economic growth based in large measure upon its diversified mineral assets—the fuels, minerals, and metals that are basic requirements for the new industry that it needs so acutely to diversify its still predominantly farm economy, stabilize its income, and retain its migrant youth who seek greater opportunity.

Since 1946, the value of mineral production in the 10 States wholly or in part within the basin has increased $1,653,520,000, or 228 percent. Placed in perspective, the record 1957 mineral production was worth $2,377,347,000, or just 4.6 percent less than cash receipts from irrigated and dryland farm crops in the same States.

Without power and water, minerals remain in the ground. It is imperative, therefore, that the significance of this industrial development be recognized, that more adequate mineral information be made available to construction agencies, and that it be accorded the consideration it deserves in water and power project planning.

The function of the Bureau of Mines is to determine how, in relation to specific water development projects, the mineral resources of the area may be recovered with minimum waste, treated with maximum efficiency, and used most effectively to further and expand the industrialization and new prosperity of the basin.

The increase will provide for the following additional work:

1. Investigations on mineral resources (except oil and gas) of the Milk River division in Montana.

2. Accelerate studies on preparation, storage, and pulverization on coal and lignite, particularly the 2.5 million tons of stockpiled lignite at Garrison Dam in North Dakota.

3. Expansion of canal-lining studies for Reclamation's Lower Cost Canal Lining Committee to reduce both the loss of water by seepage and the cost of lining canals by sediment and chemical sealants.

Bureau of Mines

Statement in Support of the 1961 Budget Estimate—Missouri River Basin Program

Senate Hearings

The mineral industry in the Missouri Basin is playing an increasingly important role in the economy of the Missouri Basin. The value of minerals produced in the region was only 4.6 percent less than the cash value of irrigated and dryland farm crops during 1957.

Industrial minerals occur in abundance in some parts of the basin. South Dakota is the leading gold-producing State in the Nation. Montana produces copper, gold, zinc, and silver. The mineral importance of Colorado is well known, though only a part of the State lies in the basin.

Adequate coordination of the mineral industry with the water, power, and agricultural industries is vital to the welfare of the area. Proper coordination will result in providing more jobs and greater economic security to the basin.

The Williston Basin in the Dakotas and Montana and the Denver-Julesburg Basin in Colorado and western Nebraska continue to develop into major sources of oil and gas. The increasing importance of the petroleum industry to the region is calling for much more consideration of water supplies for its use.

While the activities related to the abundant lignite supply in the area are small, they are, nevertheless, pointed at solving major problems facing the use of lignite as a fuel in central station thermal powerplants. Low cost firm energy that will make possible a higher cash yield from hydroelectric peaking power is the objective.

The canal lining study, currently underway, is showing encouraging results. Low cost sealing of certain seepage ground has been achieved by addition of certain sodium and calcium solutions to a clay slurry. So far, the reasons why have not been determined, nor can adequate control be had. To understand the reaction and find ways of controlling it will require extra laboratory research. The work is getting into complicated ionic theory where little factual information exists. The results obtained so far have been in the laboratory only. Field tests are still some distance away.

National Park Service—Construction and Rehabilitation

Summarized financial data

Total obligations to June 30, 1959		$3,322,018
Allotment, fiscal year 1960	$228,150	
Prior year balance available	6,482	
Total obligations, fiscal year 1960		234,632
Allotment, fiscal year 1961		244,000
Total obligations, fiscal year 1961		244,000

JUSTIFICATION

(a) *Recreation plans and surveys, $71,200.*—The estimate of $71,200 is an increase of $5,878 over the $65,322 available for obligation in the 1960 fiscal year.

With the dramatic nationwide increase in park and recreation area use, the recreation value of reservoirs constructed by the Bureau of Reclamation and the Corps of Engineers is becoming increasingly significant. The public interest in these values cannot be realized without adequate planning and arrangements for their management.

The National Park Service program of recreation plans and surveys is concerned with recreation resources in the Missouri River Basin as they are affected by, or related to, water control projects of the Bureau of Reclamation and Corps of Engineers. This program is administered through three related activities: (1) Investigation and planning on specific water control projects, based on Bureau of Reclamation schedules and covering investigation of proposed water control projects, to determine their impact on recreation resources and existing recreation developments, to discover recreation opportunities which may result from the projects, and to develop preliminary plans for public use which may be anticipated; (2) reservoir management planning concerned with resulting reservoir recreation areas, based on Bureau of Reclamation schedules and requests received from administering agencies. This activity is growing, not only from the stand-

point of negotiation of agreements and preparation of reservoir management plan material but, also, the followup review on areas already being administered and requests for assistance on development and management of these areas. The Service is responsible for determining the appropriate agency to administer reservoir recreation areas and for negotiation of agreements therefor. In addition, it includes preparation of information for reservoir management plans and supplemental advisory planning assistance; (3) recreation surveys' comprehensive planning for the utilization and reservation of recreation resources in the basin. The recreation basinwide survey report will be published early in the 1960 fiscal year. Followup action in 1961 on proposals and recommendations in this report will be required to assist the States and local governments in developing more detailed plans. The value of the comprehensive report will then be more adequately realized. This followup work will involve assistance on the preparation of legislation, partial assistance on the development of statewide plans and surveys, and individual area reconnaissance trips.

During the 1959 and 1960 fiscal years, the recreation plans and surveys' activity was programed below previous levels to reflect anticipated tapering off of certain work. Although the investigation program of the Bureau of Reclamation in the basin was reduced somewhat in fiscal years 1959 and 1960, Service responsibilities are concerned also with construction and subsequent management phases.

(*b*) *Archeological and historical surveys and excavations, $172,800.*—The estimate of $172,800 is an increase of $3,490 over the $169,310 available for obligation in the 1960 fiscal year. It is needed to enable the Service in cooperation with the Smithsonian Institution, and with State and local institutions, to keep abreast of the salvage and preservation of archeological remains, many of which are rapidly disappearing because of the construction work now underway.

The program to save archeological and historical values in advance of destruction from water control activities has made some progress but the progress has not kept pace with the rate of site flooding and the losses envisioned for fiscal year 1960. Fewer than 10 percent of the known prehistoric sites have been partially excavated; and these partial excavations involve less than 5 percent of the site in 9 out of 10 instances. Salvage efforts must be continued if more than token amounts of threatened archeological resources are to be saved.

Prehistoric people lived primarily along the riverbanks, only journeying to the plains on hunting and foraging expeditions. The surviving evidence of some entire groups is known only from areas where water control projects have been activated or are planned. Thus, priceless segments of America's prehistory will be lost forever when the reservoirs are filled.

In fiscal year 1960 funds were appropriated for the start of construction on a number of new projects which previously had not been programed. This acceleration of construction activities further complicates the programing of salvage work throughout the Missouri River Basin in an attempt to rescue this scientific data before it is flooded, and it will not be possible during the 1961 fiscal year to schedule archeological investigations in all of the reservoirs where new starts have been authorized.

A breakdown of archeological salvage projects and amounts proposed for the 1961 fiscal year is shown as follows:

Garrison Reservoir, N. Dak	$1,000
Oahe Reservoir, N. Dak. and S. Dak	69,000
Big Bend Reservoir, S. Dak	75,300
Fort Randall Reservoir, S. Dak	1,000
Red Willow Reservoir, Nebr	2,000
Wilson Reservoir, Kans	3,500
Milford Reservoir, Kans	3,000
Kasinger Bluff Reservoir, Mo	5,000
Miscellaneous historical investigations, various	13,000
Total	172,800

STATEMENT IN SUPPORT OF THE 1961 BUDGET ESTIMATES BEFORE THE SENATE SUBCOMMITTEE ON APPROPRIATIONS CONSIDERING THE PUBLIC WORKS APPROPRIATION BILL 1961

MISSOURI RIVER BASIN PROJECT

The 1961 budget estimate under the heading "Construction and rehabilitation, Bureau of Reclamation" includes $244,000 for allocation to this Service, of which $71,200 is for recreation plans and surveys, and $172,800 is for archeological and historical surveys and excavations in the Missouri River Basin.

RECREATION PLANS AND SURVEYS

This phase of the program is concerned with the recreation resources in the Missouri River Basin as they are affected by, or related to, water control projects of the Bureau of Reclamation and Corps of Engineers. The program is administered through the following three related activities:

1. *Investigation and planning.*—Includes investigation of proposed water control projects to determine their impact on recreation resources and the recreation opportunities which may result, and development of preliminary plans for anticipated public use. Field investigations and reports are scheduled for seven units during 1961 involving one or more reservoirs each. Included will be completion of a planning report involving more detailed investigation and preparation of the general development plan for the complex and potentially significant Devil and Stump Lakes restoration in North Dakota. Advisory assistance for the Corps of Engineers, involving joint field investigations and review of recreation master plans, may amount to four or five projects, plus occasional special studies. There will also be recurring Service participation on four established advisory councils.

2. *Reservoir management planning.*—Includes determination of appropriate agency (Federal, State, or local) to administer reservoir recreation areas and negotiation of agreements therefor, preparation of management plans, and furnishing of supplemental advisory planning assistance after assumption of control by the agency. The 1961 program contemplates that this Service will negotiate agreements and prepare the recreation portion of reservoir management plans on three or four reservoirs. Followup responsibilities will include field review and reports on an estimated 42 reservoir recreation areas already being administered. Supplemental planning assistance is less predictable but may involve at least 15 requests for aid on development and management matters.

3. *Recreation surveys.*—The recreation basinwide survey report is being published during the 1960 fiscal year. Followup action in 1961 on proposals and recommendations in the report will be required to assist the States and local governments in developing more detailed plans. This followup work will involve assistance in the preparation of legislation, partial assistance in the development of Statewide plans and surveys, and individual area reconnaissance trips, and may require the preparation of appendixes to the report, incorporating significant findings in more detail. The planning and construction of many new reservoirs—in the Plains States, especially—has and will materially affect recreation habits and will increase the need for additional specific planning.

ARCHEOLOGICAL AND HISTORICAL SURVEYS AND EXCAVATIONS

The purpose of this program is to recover scientifically adequate samples of the archeological and historical remains prior to their loss by flooding in reservoirs under construction in the Missouri River Basin. The campsites, villages, and burial grounds of prehistoric and historic peoples are concentrated along the rivers, in the bottom lands, and on the low terraces which will be flooded as the reservoirs are completed and filled. Unless the materials and scientific data are recovered before flooding, they are forever lost.

Each reservoir in this basin contains a segment of this country's prehistory which, more often than not, is unique and not duplicated elsewhere. Adequate samples must therefore be recovered from each reservoir to complete the prehistoric picture. Failure to recover any segment before flooding will result in gaps in the prehistoric picture which can never be filled.

A list of the major projects scheduled for salvage operations during 1961 is shown in the justification previously submitted to this committee.

OVERALL APPROACH

Chairman HAYDEN. We are so familiar with that, that I doubt any necessity for comment on it.

Commissioner DOMINY. I would just like to say this, Mr. Chairman: This overall approach is working extremely well, and we are delighted to have the Congress finance these other activities as part of the overall multipurpose development.

Chairman HAYDEN. You simply transfer the money to the other agency and it goes on about its business?

Commissioner DOMINY. That is right, sir.

They are trained to do that kind of work that they are doing, and it is much cheaper to do it this way, and we get a better total product, I am satisfied.

Chairman HAYDEN. No doubt about that, and if you tried to do it yourself you would not have the talent that they have.

COLORADO RIVER STORAGE PROJECT

Chairman HAYDEN. The budget provides for a construction program of $65,309,000 for the various units of the Colorado River storage project. This program is based on underfinancing of $2,209,000, and an appropriation of $63,100,000.

The general statements in the justification will be included in the record.

(The information referred to follows:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Various locations on the Colorado River and its tributaries and adjacent areas in the states of Arizona, Colorado, New Mexico, Utah and Wyoming.

AUTHORIZATION Act of April 11, 1956 (70 Stat. 105) | B/C RATIO 1.3 | Date Jan. 1959

LAND CERTIFICATION (See individual units) | DEFINITE PLAN REPORT (See individual units)

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 974,051,678	Appropriations to June 30, 19 59	$ 116,175,335
Net Property and Other Transfers	29,755,557	Appropriations for F. Y. 19 60	74,459,775
Cash Advances--Non-Federal	1,759,220	Appropriations to Date	190,635,110
Adjustment	1/ 52,441,000	Initial Underfinancing F. Y. 19	
		Appropriations Required for F. Y. 1961	63,100,000
Total to be Allocated	$ 1,058,007,455	Balance to Complete after F.Y. 1961	$ 720,316,568

ALLOCATIONS

Irrigation	$ 331,528,000
Power	2/ 647,746,000
M. & I. Water	3/ 45,651,000
Flood & Nav.	4/ 3,700,000
Recreation & Fish & Wildlife	5/ 10,397,500
Other	6/ 2/ 19,982,955
Total	1,058,007,455

REPAYMENT

Amount Repaid by Irrigators	$ 42,073,000
Amount Repaid by Power	2/ 937,201,000
Amount Repaid by M. & I. Water	3/ 46,861,000
Non - Reimbursable	7/ 31,872,455
Total	1,058,007,455

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ (See Individual Units and Participating Projects)
Repayment of Investment per acre: By Irrigators	
By Power Revenues	
By M. & I. Water Users	
Payment Capacity per Acre Individual Annual Charges: O. & M.	$ Units)
Construction	
Total	$

STATUS OF REPAYMENT CONTRACT:
See individual units

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date
Curecanti Dams:			
Blue Mesa	915,000 AF	-	6-66
Morrow Point	117,000 AF	-	6-70
Flaming Gorge Dam	3,789,000 AF	18	6-64
Glen Canyon Dam	26,040,000 AF	29	6-64
Navajo Dam	1,709,000 AF	35	1-63

	Size or Cap.	Completion % 1-1-60	Completion Date
Curecanti Powerplants:			
Blue Mesa	60,000 KW	-	6-66
Morrow Point	40,000 KW	-	6-70
Flaming Gorge powerplant	108,000 KW	10	6-64
Glen Canyon Powerplant	900,000 KW	9	6-66

Acreage Full Supply 113,900 | Supplemental Supply 231,900 | Total Acres 345,800 | Power kw 1,169,000

Region	Date	Project and State
4	1/18/60	Colorado River Storage and Participating Projects, Arizona-Colorado-New Mexico-Utah-Wyoming

Rev. BR-400-3/31/60 For Senate Hearings per H. D. 356

[1] Reimbursable interest during construction.
[2] Includes reimbursable interest during construction totaling $49,981,000 as follows:

Glen Canyon	$29,453,000
Flaming Gorge	3,390,000
Curecanti	4,987,000
Transmission division	9,089,000
Central Utah project	3,062,000

[3] Includes reimbursable interest during construction on Vernal unit, central Utah project of $22,000 and remaining units of central Utah project of $2,438,000, totaling $2,460,000.
[4] To be financed by funds other than Upper Colorado River Basin fund under sec. 8 of authorizing act.
[5] Includes $2,633,000 to be financed from Upper Colorado River Basin fund under sec. 6 of act of Apr. 11, 1956, and $1,728,000 to be financed by other funds under sec. 8 of act of Apr. 11, 1956.
[6] Includes $2,825,985 nonreimbursable from CRDF and $2,516,220, contributions and advances.
[7] Includes flood control, recreation, fish and wildlife conservation, Colorado River development fund investigations, contributions, and advances.

Colorado River Storage Project and Participating Projects—General Statement

Summarized financial data

Fiscal year 1960:	
Appropriation	$74,459,775
Non-Federal advance from State of Colorado	65,000
Application of prior-year funds	1,636,175
Balance available in subsequent years	−26,500,000
Total obligation program, fiscal year 1960	[1] 49,660,950
Fiscal year 1961:	
Appropriation	63,100,000
Application of prior-year funds	26,500,000
Total obligation program, fiscal year 1961	[2] 89,600,000

[1] Excludes initial underfinancing of $175,000.
[2] Excludes initial underfinancing of $2,209,000.

The Bureau is requesting $63,100,000 for work financed by Upper Colorado River Basin fund in fiscal year 1961. This amount plus $2,209,000 initial underfinancing and $26,500,000 of prior-year funds will provide a total program of $91,809,000. As of June 30, 1960, construction work will be underway on three storage units of the Colorado River storage project and five participating projects. In addition, the advance planning program leading to plans for development of the remaining storage unit and participating projects will be active, and investigations of future high-voltage lines will be in progress on the transmission division.

With the funds requested for fiscal year 1961 construction of the main storage dams and appurtenant works on the Flaming Gorge, Glen Canyon, and Navajo projects will continue, and studies will continue on the transmission facilities under the transmission division. Construction of the Hammond, Seedskadee, and Smith Fork participating projects will be in progress, and funds are provided to initiate construction of the Blue Mesa facilities of the Curecanti unit and the Florida participating project. Investigation of future developments will continue under the advance planning program. During fiscal year 1961 construction will continue on Paonia participating project and Vernal unit, and irrigation service will be made available on the Paonia project to about 1,200 acres of new land and 700 acres of land now inadequately served.

Upper Colorado River Basin fund

Activity	Fiscal year 1960				Fiscal year 1961		
	Appropriations	Prior year funds programed	Other	Total obligations	Appropriations	Prior year funds programed	Total obligations
Colorado River storage project and participating projects:							
Colorado River storage project:							
Curecanti unit, Colorado					$1,400,000		$1,400,000
Flaming Gorge unit, Utah-Wyoming	$12,675,000	$222,673		$12,897,673	12,000,000		12,000,000
Glen Canyon unit, Arizona-Utah	43,736,075	635,396	[1] −$26,500,000	17,871,471	27,035,000	$26,500,000	53,535,000
Navajo unit, Colorado-New Mexico	9,696,375	445,569		10,141,944	11,776,000		11,776,000
Transmission division	702,000	62,267		764,267	518,000		518,000
Advance planning	797,550	163,463		961,013	938,000		938,000
Participating projects:							
Central Utah project, Vernal unit, Utah	1,950,000	65,337		2,015,337	2,189,000		2,189,000
Florida project, Colorado					750,000		750,000
Hammond project, New Mexico	292,500		[2] 100,000	392,500	1,300,000		1,300,000
Paonia project, Colorado	3,105,375	41,470	[3] 65,000	3,211,845	903,000		903,000
Seedskadee project, Wyoming	1,154,400			1,154,400	5,000,000		5,000,000
Smith Fork project, Colorado	350,500		[2] 75,000	425,500	1,500,000		1,500,000
Subtotal, Upper Colorado River Basin fund	74,459,775	1,636,175	−26,260,000	49,835,950	65,309,000	26,500,000	91,809,000
Undistributed reduction based on anticipated savings and slippage			−175,000	−175,000	−2,209,000		−2,209,000
Total, Upper Colorado River Basin fund	74,459,775	1,636,175	−26,435,000	49,660,950	63,100,000	26,500,000	89,600,000

[1] Fiscal year 1960 unobligated balance programed in fiscal year 1961.
[2] Initial underfinancing.
[3] Non-Federal advance by State of Colorado.

RECREATION FACILITIES

Chairman HAYDEN. Section 8 of the Colorado River Storage Act authorizes the Secretary to construct public recreation facilities at project reservoirs on a nonreimbursable basis.

Will the development of these recreational areas be a responsibility of the Bureau of Reclamation or the National Park Service?

Commissioner DOMINY. Well, it will be a joint undertaking, with the National Park Service performing the techniqcal studies relating to this function, and any construction that would be undertaken would be done on the basis of their knowledge and competence in the field of recreation and what facilities are necessary.

I would like to have Mr. Palmer comment more fully on that, Mr. Chairman.

Mr. PALMER. We work very closely with the Bureau of Sport Fisheries and Wildlife and the National Park Service in developing the respective programs under section 8.

As the Commissioner has outlined, we would look to these agencies to provide technical guidance. In the acquisition of land, and the actual construction program, these could be carried out more economically if the Bureau of Reclamation serves as the agent for construction and for land purchases.

For example, modifications of actual structures, dams and reservoirs, and so forth, can best be accomplished by the construction forces on the job and would be done by the Bureau of Reclamation. It would be done, however, on the basis of plans developed by the technical agencies of the Department responsible for these functions.

Chairman HAYDEN. Well, if this is a responsibility of the Park Service, will they request funds for these developments, or will you transfer funds to them?

Commissioner DOMINY. I would like to have Mr. Larson comment there.

Mr. LARSON. That matter is before the Secretary now to decide whether the Bureau of Reclamation should budget for this work. As it is today, there are small amounts in the National Park Service and Sport Fisheries and Wildlife budgets for studies in fiscal year 1961. The final decision is not yet made as to whether we will have funds in the Reclamation budget or in two service bureaus' budgets.

Chairman HAYDEN. Well, then, the time is not quite ripe yet, actually to go to work; is that right?

Mr. LARSON. We are getting close to the time that we will have to settle it, I am sure.

INTEREST RATE

Chairman HAYDEN. Section 5 of the Colorado River Storage Act established the formula that is used to determine the rate of interest that will be used for the power and municipal water features of the project.

1. Under this formula, what is the interest rate for the Glen Canyon, Flaming Gorge, and Vernal units of the project?

Commissioner DOMINY. Under that formula the work that is already underway, the interest being charged is 2⅞ percent, Mr. Chairman.

Chairman HAYDEN. Assuming that construction is initiated on the Curecanti unit in fiscal 1961, what would the interest rate be under the existing formula?

Commissioner DOMINY. Unless an action that is now pending before Congress in connection with the Norman project were to become law—that action would have the effect of changing the interest rate formula for use on yet to be started units of the Colorado storage project that proposed formula now yields 2¾ percent interest; but under the present Colorado Storage Project Act formula, we would have in-interest of about 4⅛ percent.

Chairman HAYDEN. As I recall, the Senate passed a bill in the last session of the Congress amending this interest formula. Has the House taken any action on this bill?

Commissioner DOMINY. I am informed that the full committee has reported it out.

Chairman HAYDEN. It is on the calendar?

Commissioner DOMINY. It is on the calendar; yes, sir.

CURECANTI UNIT, COLORADO, NEW START

Chairman HAYDEN. The budget program includes $1.4 million for the initiation of construction of the Curecanti unit in Colorado.

The justifications will be included in the record.

(The justifications referred to follow:)

PF-65 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Colorado River Basin--Gunnison River in Montrose County, Colorado, on Gunnison River between Gunnison, Colorado, and the Black Canyon of the Gunnison National Monument.

AUTHORIZATION Act of April 11, 1956 — B/C RATIO 1.23 — Date Feb. 1959

LAND CERTIFICATION None required — ECONOMIC JUSTIFICATION REPORT February 1959

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 68,581,550	Appropriations to June 30, 19	$
Net Property and Other Transfers	3,833,450	Appropriations for F. Y. 19	
Cash Advances--Non-Federal	35,000	Appropriations to Date	
Adjustment	1/ 4,987,000	Initial Underfinancing F. Y. 19	
		Appropriations Required for F. Y. 19 61	3/ 1,400,000
Total to be Allocated	$ 77,437,000	Balance to Complete after F.Y. 19 61	$ 67,181,550

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$ 2,793,000	Amount Repaid by Irrigators	$	Irrig. Invest. per Acre	$
Power	1/ 70,230,550	Amount Repaid by Power	73,023,550	Repayment of Investment per acre:	
Contribution	2/ 35,000	Amount Repaid by M. & I. Water		By Irrigators	$
Flood & Nav.	1,013,000			By Power Revenues	
CRD Invest.	97,000			By M. & I. Water Users	
Recreation	3,268,450	Non - Reimbursable	4/ 4,413,450		
Total	$ 77,437,000	Total	$ 77,437,000		

Payment Capacity per Acre	$
Annual Charges: O. & M.	$
Construction	
Total	$

STATUS OF REPAYMENT CONTRACT:

None required

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Blue Mesa Dam & Reservoir	915,000 AF.	0	6-66				
Blue Mesa Powerplant & Swyd	60,000 KW.	0	6-66				
Morrow Point Dam & Reser.	117,000 AF.	0	6-70				
Morrow Point PP & Switchyd.	40,000 KW.	0	6-70				
Permanent Operating Facil.		0	6-70				
Permanent Camp		0	1967				
Temporary Camp		0	1967				

Acreage Full Supply _____ Supplemental Supply _____ Total Acres _____ Power kw 100,000

Region	Date	Project and State
4	1/18/60	Colorado River Storage Project, Curecanti Unit, Colorado

Note: Above figures based on integrated two dam unit on which Economic Justification was made to Congress (H.D. 201, 86th Congress, First Session). Only construction of Blue Mesa facilities currently scheduled.

BR-404

1 Includes $4,987,000 reimbursable interest during construction.
2 Contribution by State of Colorado for advance planning.
3 For initiation of construction of Blue Mesa Dam and associated facilities.
4 Includes contribution, flood control, Colorado development fund investigations and recreation cost which is to be financed from other than the Upper Colorado River Basin fund.

Benefit-cost ratio shown on project data sheet is based on 2½ percent interest. Benefit-cost ratio based on direct benefits only and 2½ percent interest is 1.20. Benefit-cost ratio based on total benefits and 3 percent interest is 1.14.

JUSTIFICATION

Description.—The Curecanti unit is one of four authorized storage units of the Colorado River storage project and participating projects. The primary purposes of the Curecanti unit are the regulation and storage of floodflows of the Gunnison River and the generation of hydroelectric power. Water stored, as in other storage units of the project, will assist in complying with the terms of the Colorado River compact. In addition, it will provide benefits to recreation, fish and wildlife conservation and irrigation in the Upper Colorado River Basin. The project data sheet figures are based on the integrated two-dam unit although the Blue Mesa facilities are all that are currently scheduled for construction.

The Blue Mesa and Morrow Point features of the unit will together develop 760 feet of the 1,000 feet of potential power head along a 40-mile reach of a deep canyon section of the Gunnison River located below Gunnison, Colo., and above the Black Canyon of the Gunnison National Monument. Each of these two features consists of a dam and reservoir on the river with a powerplant at the toe of the dam. Investigations are underway of the economic feasibility of including a third development in the unit—Crystal Dam, Reservoir, and powerplant.

The Blue Mesa Dam will be located on the river at a point about 30 miles below Gunnison and 1½ miles below Sapinero, Colo. The earthfill and rockfill structure will rise 350 feet above streambed. The Blue Mesa Reservoir will have a capacity of 915,000 acre-feet when filled to its normal high water elevation. The Blue Mesa powerplant at the toe of the dam will have an installed capacity of 60,000 kilowatts. The fiscal year 1961 appropriation requested is to be used for initiation of the Blue Mesa Dam and associated facilities.

The Morrow Point Dam, a concrete arch structure 400 feet high, is to be constructed 12 miles below Blue Mesa Dam about a quarter a mile above the mouth of Cimmaron Creek. The Morrow Point Reservoir will impound 117,000 acre-feet of water and provide head for a powerplant of 40,000 kilowatts of installed generating capacity. No construction on the Morrow Point facilities is scheduled in the immediate future.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed, fiscal year 1961:

Blue Mesa Dam and Reservoir, $1,250,000.—Provides funds for the State of Colorado to make surveys and prepare an estimate of the cost of relocating U.S. Highway No. 50 around reservoir. The program also provides for acquisition of right-of-way for damsite and area required for construction activities. Designs for construction of the dam will be prepared in order to be ready to award the contract as soon as right-of-way and highway relocation actions will permit construction to proceed in an orderly fashion.

Permanent operating facilities, $16,000.—This amount will provide for the purchase of operating equipment to be used by construction forces during construction of the unit and which will later be used in the permanent operation of the unit.

Permanent camp, $34,000.—Provides for the purchase of right-of-way required for the permanent camp facilities listed below.

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
Land and land rights	$34,000			$34,000	
3-bedroom houses (40)	800,000				$800,000
Permanent utilities and streets	365,000				365,000
Total	1,199,000	[1] $10,489	[1] $2,098	34,000	1,152,413

[1] Investigation costs not distributed to above items.

Temporary camp, $100,000.—This program will provide for the purchase of temporary transa homes and trailers.

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
Transa houses and trailers	$875,000			$100,000	$775,000
Streets, utilities, and miscellaneous	626,000				626,000
Total	1,501,000			100,000	1,401,000

Changes in total obligations

	Obligations
1960 congressional justification	(1)
1961 congressional justification	$68,581,550

[1] Not included in the fiscal year 1960 congressional justification.

DESCRIPTION OF PROJECT

Chairman HAYDEN. Describe this unit for the committee, please.

Commissioner DOMINY. The Curecanti unit, Colorado, is one of four authorized storage units of the Colorado River storage project and participating projects and the primary purpose is the regulation of floodflows of the Gunnison River and generation of hydroelectric power. Water stored, as in other storage units of the project, will assist in complying with the terms of the Colorado River compact.

IRRIGATION BENEFITS

In addition, the Curecanti unit would provide benefits to irrigation and fish and wildlife in the Upper Colorado River Basin. There will be no irrigation directly from this unit but from this upstream storage it will help make possible the upstream development as was visualized by the Colorado River storage project.

Senator HAYDEN. You have an allocation of $2.7 million for irrigation. Will you please explain your comment on that?

Commissioner DOMINY. That is the irrigation benefit that would accrue from having this water stored high up on the Colorado River storage project for ultimate release and use in the upper basin.

The Curecanti unit at the moment consists of two dams, Blue Mesa and Morrow Point which have been certified to Congress as being feasible. We are still studying a third dam at Crystal Point and we believe, Mr. Chairman, that this, too, will prove to be a feasible addition to the Curecanti unit and so ultimately the Curecanti unit may consist of three dams. At the moment only two are in prospect.

STORAGE DAM EXPENSE

Chairman HAYDEN. How do these features fit in with the other storage projects?

Commissioner DOMINY. Well, this is an integral part of the Colorado River storage project plan. That was to build these primary storage units for the control of the water so that we could level out, so to speak, the flow of the river and guarantee to the lower basin States the waters to which they are entitled under the compact and by leveling out through the storage dams at Curecanti, Navajo, Flaming Gorge, and Glen Canyon, we do have the regulation of the river which permits the irrigation development in the upper basin under the participating projects.

Chairman HAYDEN. I see.

Commissioner DOMINY. If all the dams were down at the lower reach you would still have trouble putting the water to optimum use in the upper basin States.

FLAMING GORGE UNIT, UTAH AND WYOMING

Chairman HAYDEN. The budget program includes $12 million for the continuation of construction of the Flaming Gorge unit in Utah and Wyoming.

The justifications will be included in the record.

(The justification follows:)

PF-45
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Colorado River Basin -- In Daggett County Utah, and Sweetwater County, Wyoming. The dam is located approximately 6 miles south of Utah-Wyoming border.

AUTHORIZATION: Act of April 11, 1956 | B/C RATIO 1.3 | Date Dec. 1959

LAND CERTIFICATION: None Required | DEFINITE PLAN REPORT: None Required

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 66,447,000	Appropriations to June 30, 19 59	$ 16,328,335
Net Property and Other Transfers	3,253,000	Appropriations for F. Y. 1960	12,675,000
Cash Advances--Non-Federal		Appropriations to-Date	29,003,335
Adjustment 1/	3,390,000	Initial Underfinancing F. Y. 19 60	
		Appropriations Required for F. Y. 19 61	12,000,000
Total to be Allocated	$ 73,090,000	Balance to Complete after F.Y. 1961	$ 25,443,665

ALLOCATIONS 3/		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$ 14,495,917	Amount Repaid by Irrigators	$	Irrig. Invest. per Acre $	Payment Capacity per Acre $
Power 1/	55,398,000	Amount Repaid by Power 1/	69,893,917	Repayment of Invest-ment per acre:	Annual Charges:
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators $	O. & M. $
Flood & Nav.				By Power Revenues	Construction
Recreation	3,109,000			By M.& I Water Users	
CRDF Invest.	87,083	Non - Reimbursable 2/	3,196,083		
Total	$ 73,090,000	Total	$ 73,090,000		Total $

STATUS OF REPAYMENT CONTRACT:

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Flaming Gorge Dam & Reservoir	3,789,000AF	18	6-64				
Flaming Gorge Powerplant and Switchyard	108,000KW	10	6-64				
General Property		24	6-64				

Acreage Full Supply --- Supplemental Supply --- Total Acres --- Power kw 108,000

Region	Date	Project and State
4	1-18-60	Colorado River Storage Project, Flaming Gorge Unit, Utah-Wyoming

BR-410

1 Includes $3,390,000 reimbursable interest during construction.
2 Includes $3,109,000 recreation cost which is to be financed from other than Upper Colorado River basin fund and $87,083 CRDF
3 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$14,496,000	$14,495,917
Power	55,398,000	55,398,000
Recreation	1,222,000	3,109,000
Colorado River development fund	87,000	87,083
Total to be allocated	71,203,000	73,090,000

Total to be allocated has been increased by $1,887,000 for increase in recreation cost to be incurred under section 8 of the act of April 11, 1956, which is to be financed from sources other than the Upper Colorado River Basin fund. Colorado River development fund has been increased by $83 as the result of using actual rather than round-off figures with a corresponding adjustment in the irrigation allocation.

JUSTIFICATION

Description.—The primary purposes of the Flaming Gorge unit are the regulation and storage of floodflows of the Green River and the generation of hydroelectric power. Water stored, as in the other storage units of the project, will assist in complying with the terms of the Colorado River compact and will, by exchange, furnish an irrigation supply for the participating projects in the upper basin States. In addition, there will be benefits from fish and wildlife conservation and recreational facilities.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed for fiscal year 1961

Flaming Gorge Dam and Reservoir, $11,417,495.—Provides for completion of all land acquisition, and completion of all highway and grave relocations; the continuation of concrete placing operations in the dam; the continuation of reservoir clearing in the lower reach of the reservoir; the procurement of Government furnished equipment; and the start of reservoir clearing in the upper reach of the reservoir.

Flaming Gorge powerplant and switchyard, $4,053,000.—Provides for continuation of work on the switchyard and the powerplant. It also provides for continuation of procurement of Government furnished materials and equipment for the powerplant and switchyard. Orders will be placed during the year for generators and governors, a 65-ton gantry crane, and the circuit breakers.

Service facilities, —$512,000.—Represents miscellaneous equipment purchases for community, office, shop, and warehouse which are more than offset by charges from prior years to be distributed to project features on a use basis during the year. Of the $5 million total estimate for service facilities, $4,652,406 has been used to June 30, 1959, $241,190 is scheduled for use in fiscal year 1960, $32,000 in fiscal year 1961, and $74,404 in subsequent years. The following table shows the details of these amounts:

Item	Total estimate	Total to June 30, 1959	Fiscal year 1960	Fiscal year 1961	Subsequent years
Permanent and temporary housing, streets, water, sewage, and electrical distribution systems	$2,925,000	$2,899,390	$25,610		
Temporary field offices	5,884	5,884			
Temporary metal garages	98,000	73,585	24,415		
Administration buildings, laboratory, and garage and fire station	256,393	245,904	10,489		
Temporary warehouse	100,598	74,684	25,914		
Water supply, treatment, plant and equipment	490,000	490,000			
Exploratory well	7,951	7,951			
Roads—temporary access roads	483,579	483,579			
Miscellaneous equipment	345,000	177,559	114,285	$6,000	$47,156
Office furniture and equipment	50,000	39,247	5,000	2,000	3,753
Transportation equipment	100,000	84,763	5,000	4,000	6,237
Stores equipment	10,595	1,190	2,438	5,000	1,967
Shop equipment	25,000	6,113	4,030	5,000	9,857
Laboratory equipment	15,000	5,991	9,009		
Tools and work equipment	85,000	55,859	15,000	10,000	4,141
Communication equipment	2,000	707			1,293
Subtotal	5,000,000	4,652,406	241,190	32,000	74,404
Charged to permanent property	−5,000,000	−146,899	−544,000	−544,000	−3,765,101
Total		4,505,507	−302,810	−512,000	−3,690,697

Stores, —$24,000.—Represents $24,000 for purchase of stores items and Government-furnished equipment, $15,000 for stores expense which is more than offset by —$63,000 of stores purchased in prior years that will be used and charged into the project features during the year.

Transfers, credits, and other expenditures, —$10,000.—Provides for the distribution to permanent facilities of $10,000 of prior costs for the natural gas service system.

Undelivered orders, —$2,924,495.—Represents the net change in obligations for goods and services on order but not yet received.

Changes in total obligations

	Obligations
1960 congressional justification	$66,447,000
1961 congressional justification	66,447,000
No change	

POWER PRODUCTION

Chairman HAYDEN. At the present rate of construction, when will power come on the line from this unit?

Commissioner DOMINY. Under our present schedule, initial storage is in the spring runoff of 1962. We start to fill in calendar year 1962, and the first power would be on the line in June 1963.

Chairman HAYDEN. Any further comments you would like to make with respect to the project?

Mr. DOMINY. Well, I think that the committee would be interested in, I am sure, one little problem that we had.

The ice jammed pretty seriously on the Green River this year and, took out one section of our temporary bridge. As a matter of fact, we had one death in connection with that. The contractor was attempting to salvage this section of bridge that was floating downstream and one of his foremen lost his life in this effort. The bridge has been restored to service. It was very necessary, of course, not only in—well, the whole construction program, everything that we are bringing in comes in across this access road and the lower level bridge that ultimately will be flooded out. That is the only untoward incident that occurred that I know of that the committee would be interested in.

The work is going very well. The excavation for the foundation work is advancing properly. The tunnel proved to be fully adequate to take care of the spring runoff, even with the ice jam. It was nip and tuck for a while as the ice jammed on the upstream side but the tunnel had sufficient capacity, so it worked out all right. So I believe construction is going very satisfactorily.

GLEN CANYON UNIT, ARIZONA

Chairman HAYDEN. The budget program includes $27,035,000 for the Glen Canyon unit in Arizona.

The justifications will be included in the record.

(The justification follows:)

PF-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Upper Colorado River Basin--Northern Arizona in Coconino County and southeastern Utah in Kane and San Juan Counties. The dam is on the Colorado River about four miles south of the Arizona-Utah boundary and 15 river miles upstream from Lee's Ferry. The reservoir will extend into southeastern Utah.

AUTHORIZATION Act of April 11, 1956 | B/C RATIO 1.4 | Date December 1958

LAND CERTIFICATION None required | DEFINITE PLAN REPORT None required

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 322,439,244	Appropriations to June 30, 1959	83,242,148
Net Property and Other Transfers	10,870,643	Appropriations for F. Y. 19 60	43,736,075
Cash Advances--Non-Federal	1,635,000	Appropriations to Date	126,978,223
Adjustment	1/ 29,453,000	Initial Underfinancing F. Y. 1960	--
		Appropriations Required for F. Y. 1961	27,035,000 1
Total to be Allocated	$ 364,397,887	Balance to Complete after F.Y. 19 61	$ 168,426,021

ALLOCATIONS 4/		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$ 48,761,000	Amount Repaid by Irrigators	$	Irrig. Invest. per Acre	$
Power 1/	303,472,645	Amount Repaid by Power	352,233,645	Repayment of Investment per acre:	
Recreation	9,241,000	Amount Repaid by M. & I. Water		By Irrigators	$
Flood & Nav.				By Power Revenues	
CRDF Invest.	628,242			By M. & I. Water Users	
Advances 2/	2,295,000	Non-Reimbursable 3/	12,164,242		
Total	$ 364,397,887	Total	$ 364,397,887		

Payment Capacity per Acre	$
Annual Charges:	
O. & M.	$
Construction	
Total	$

STATUS OF REPAYMENT CONTRACT: None required

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Glen Canyon Dam & Reservoir	28,040,000AF	29	6-64				
Glen Canyon Powerplant and Switchyard	900,000KW	9	6-66				
Protection of Rainbow Bridge National Monument		0	9-62				
General Property		0	6-66				

Acreage Full Supply ____ Supplemental Supply ____ Total Acres ____ Power kw 900,000

Region	Date	Project and State
4	1-18-60	Colorado River Storage Project, Glen Canyon Unit, Arizona-Utah

Rev. 416-3/31/60 For Senate Hearings Per H. D. 355

[1] Includes reimbursable $29,453,000 interest during construction.
[2] Includes $1,635,000 advanced by State of Arizona, $600,000 allocated by the Bureau of Public Roads, $60,000 advanced by the city of Los Angeles.
[3] Includes advances, Colorado River development fund, and cost of recreation facility works which are to be financed from funds other than Upper Colorado River Basin Fund.
[4] Change in allocations:

	Fiscal year 1960 justifications	Fiscal year 1960 justifications
Irrigation	$48, 761, 000	$48, 761, 000
Power	303, 472, 887	303, 472, 645
Colorado River development fund	628, 000	628, 242
Advances	2, 295, 000	2, 295, 000
Recreation		9, 241, 000
Total to be allocated	355, 156, 887	364, 397, 887

No actual change in basic allocation. Total to be allocated has been increased by the addition of recreation in the amount of $9,241,000 for facilities to be constructed under provisions of section 8 of the act of April 11, 1956, with funds from sources other than the Upper Colorado River Basin Fund. Colorado River development fund (CRDF) has changed from a rounded amount to an actual amount, with a compensating adjustment in the power allocation.

JUSTIFICATION

Description.—The primary purpose of the Glen Canyon unit, which is located in northern Arizona and southeastern Utah, is the regulation and storage of floodflows of the upper Colorado River and the generation of hydroelectric power. Water stored, as in the other storage units of the project, will assist in complying with the terms of the Colorado River compact and will, by exchange, furnish an irrigation supply for the participating projects. In addition, there will be benefits from silt retention, fish and wildlife conservation, and improved recreational facilities.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed, fiscal year 1961

Glen Canyon Dam and Reservoir, $32,544,933.—The program provides for continuing concrete placement for the dam, continuing payments on cement, pozzolan, and other materials and equipment for the dam, and miscellaneous associated

expenditures. Contracts will be awarded for additional materials and equipment.

Glen Canyon powerplant and switchyard, $18,098,476.—The program provides for continuing construction of the powerplant, payments on materials and equipment for installation in the powerplant, and miscellaneous associated expenditures. Contracts for generators, governors, and other equipment will be awarded. Design and specification work for the completion contracts for the powerplant and switchyard will continue.

Protection of Rainbow Bridge National Monument, $3,500,000.—For completion of preconstruction work and award of contract for the construction of the protective work for Rainbow Bridge National Monument, payment of contract earnings, and miscellaneous associated expenditures.

Service facilities, —$423,000.—Represents the acquisition of replacement automotive equipment and other equipment and tools. Some charges will be distributed to project features on a use basis. Of the $11,800,000 total estimate for service facilities, $10,396,242 has been used to June 30, 1959, $630,917 is scheduled for fiscal year 1960, $97,000 in fiscal year 1961, and $675,841 in subsequent years. The following table shows the details of these amounts:

Item	Total estimate	Total to June 30, 1959	Fiscal year 1960	Fiscal year 1961	Subsequent years
Permanent housing	$3,941,000	$3,578,822	$94,000		$268,178
Temporary housing					
Portable housing	373,756	373,756			
Warehouse	539,419	535,662	3,757		
Municipal building	117,000	112,806	4,194		
Police, garage, and fire station building and administration building	691,000	473,658	106,097		111,245
Laboratory	69,000	65,757	3,243		
Temporary field buildings	120,337	120,337			
Water supply and treatment plant elevated tank, reservoir	1,626,624	1,626,624			
Sewage treatment plant	321,889	321,889			
Airstrip	311,139	311,139			
Grading, streets, sidewalks, fencing, utilities, soil stabilization, landscaping	2,359,922	2,051,817	296,378		11,727
Grading and foundations for portable houses	35,557	35,557			
Temporary utilities and trailer courts	60,000	57,900	2,100		
Access roads	58,357	51,209	7,148		
Miscellaneous equipment	330,000	254,288	5,000	$20,000	50,712
Office furniture and equipment	130,000	109,020	15,000	5,980	
Transportation equipment	340,000	153,034	52,000	8,000	126,966
Stores equipment	82,000	61,113	8,000	4,000	8,887
Shop equipment	100,000	9,689	20,000	20,000	50,311
Laboratory equipment	68,000	27,443	5,000	5,000	30,557
Tools and work equipment	100,000	52,503	7,000	30,020	10,477
Communication equipment	25,000	12,219	2,000	4,000	6,781
Subtotal	11,800,000	10,396,242	630,917	97,000	675,841
Charged to permanent property	−11,800,000	−289,130	−561,899	−520,000	−10,428,971
Total		10,107,112	69,018	−423,000	−9,753,130

Stores, $25,000.—Represents $7,691,928 to be expended for cement, pozzolan, and other stores items which will be offset by $7,666,928 worth of materials that will be used in unit features during the year.

Transfers, credits, and other expenditures, —$210,409.—Primarily consisting of prior year costs of $200,000 distributed to project features and charges from Solicitor's Office financed from appropriation to that Office.

Changes in total obligations

	Obligations
1960 congressional justification	$324,074,244
1961 congressional justification	324,074,244
No change	

POWER PRODUCTION

Chairman HAYDEN. When will Glen Canyon power come on the line?

Commissioner DOMINY. Glen Canyon power will start coming in on the line—the first unit—in June 1964. We expect to start the initial storage in the spring of calendar year 1963 and we would actually, late in the fall, start to store the winter flows to the extent we could that winter and be ready for the spring runoff in the spring of 1963. And if we get normal water years, we will get power on the line the following season.

Chairman HAYDEN. I see.

Now, I notice that for the current fiscal year $43.7 million was provided for this unit. In view of the strike, how much of this sum will you use?

Commissioner DOMINY. Well, we have, I think, informed the Congress on this and as a matter of fact, if you remember, our budget amendment lowered our estimate by another $8 million after we found out the true delays that were occasioned by the strike. We are certainly pleased that everything is going well now. The excavation is practically completed.

As a matter of fact, I hope the chairman and other members of this committee will find it possible to attend the ceremony which is now scheduled on the 17th of June for the placing of the first bucketful of concrete some 720 feet down in the canyon from the canyon rim.

Chairman HAYDEN. Well, I am sorry, but unless we are going to adjourn this Congress the first week in July, we cannot be there.

Commissioner DOMINY. Well, I am sorry, Mr. Chairman. But, answering your specific question, my staff advises me that we have $26.5 million in reserve by reason of the delays in construction in fiscal year 1960.

Chairman HAYDEN. I think you should submit a statement for the record on the strike and its settlement.

Commissioner DOMINY. We will be very pleased to do that. As I recall, we discussed this some on the opening day and the material you requested is available for placing in the record at this point.

Chairman HAYDEN. I think it would be helpful.

Commissioner DOMINY. Very good.

(The information requested follows:)

U.S. DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

DENVER FEDERAL CENTER

DENVER, COLO.

APRIL 21, 1960.

In the Matter of Claim for Additional Compensation Under Contract No. 14-06-D-2403 Dated July 8, 1957, Between the United States and Merritt-Chapman & Scott Corp. for Construction of Glen Canyon Dam and Powerplant, Specifications No. DC-4825, Glen Canyon Unit, Colorado River Storage Project

FINDINGS OF FACT AND DECISION BY THE CONTRACTING OFFICER

1. This findings of fact is issued pursuant to clause 6 of the general provisions of the contract.

2. The contract described in the heading, which was entered into on April 29, 1957, provided for a performance period of 2,500 days, or approximately 7 years from the date of notice to proceed. Accordingly, the contract completion date is March 6, 1964, subject to allowable extension of time pursuant to clause 5 of the general provisions of the contract. Paragraph 19 of the specifications, which is quoted in pertinent part below, provides for adjustment in contract earnings (commonly called wage escalation) based upon increases or decreases in hourly wage rates paid after May 31, 1959, as compared with the prevailing hourly wage rates established pursuant to the Bacon-Davis Act and set forth in the specifications. Certain categories of labor costs including "subsistence payment," are expressly excluded from escalation under paragraph 19.

3. Two claims for wage escalation under the contract have been submitted by the contractor, the first claim being for escalation of wages paid to electrical workers and the second being for escalation of wages paid to workers of the so-called five basic construction crafts. The so-called five basic crafts are made up of carpenters, teamsters, operating engineers, cement masons, and laborers. The precise amount involved in the claims being based upon wages as paid by the contractor as the work is performed cannot be determined until the job has been completed. However, it is estimated that the additional escalation payments claimed will eventually amount to upward of $3 million.

4. Paragraph 19 of specifications No. DC-4825 provides in part:

"*Adjustment for changes in cost.* All monthly estimates for payments, as provided for in clause No. 7 of the general provisions, made for work performed during the first full weekly pay period after May 31, 1959, and thereafter, will be subjected to adjustment to compensate for change either upward or downward in the amount of wages paid to laborers and mechanics.

"The amounts due under the contract will be adjusted by the amount of 85 percent of the difference between the total amount of wages actually paid to laborers and mechanics employed under the contract or any construction subcontract, and the total amount of wages that would have been paid if computed at hourly base rates determined as follows: For any classification of laborer or mechanic, the rate per hour to be used as a base for determination of the adjustment will be determined from the following sources in the order given: (1) From the rate per hour stated in paragraph 16; if the rate cannot be so established, then (2) from the highest rate per hour for the classification as stated in any agreements in effect in the area and existing between labor unions or groups and contractors on the date of the contract; or (3) if hourly rates cannot be established from any of the above sources, then the average of the hourly rate paid for the first 6 months for the labor classification for work under this contract will be the basic hourly rate.

"In computing the adjustment in compensation to be made under this paragraph, illegal working time of laborers and mechanics; *payments in the form of bonuses, incentive payments, or gratuities, subsistence payments, and travel allowances;* and all costs of compensation insurance and other direct or indirect charges, contributions, or taxes, either State or Federal, applying to payrolls will not be considered." [Emphasis supplied.]

5. The facts concerning the two claims are different to some extent; therefore, they will be considered separately.

ELECTRICAL WORKERS

6. For a number of years prior to the start of work at the site of Glen Canyon Dam, "subsistence" had been paid in Arizona and elsewhere to electricians and/or linemen working beyond commuting distance from certain cities as named in the labor agreements between the International Brotherhood of Electrical Workers and the contractor's organization (National Electrical Contractor's Association). This condition has prevailed throughout the industry since the end of World War II and was applicable during the construction of Davis Dam during 1946–50 near Kingman, Ariz. At the time bids for Glen Canyon Dam were received, daily subsistence was required to be paid to electricians who might work at the construction site, now known as Page, Ariz. Agreements in effect in 1956 between the International Brotherhood of Electrical Workers and the National Electrical Contractor's Association, Arizona Chapter, required the employer to furnish free board and lodging or pay $7 per day subsistence when the employee was working beyond practicable commuting distance away from a "free zone." A "free zone," under the terms of the agreement, would be a city where the union maintained a unit, or where the employer has a permanently established shop. The subsistence was to be paid on the basis of 7 days per week, or at the employer's option, he could pay for travel to and from the dispatching point in lieu of paying subsistence over the weekend. Attached as Exhibit A is a copy of the pertinent portions of the labor requirements effective in 1956 and 1957, published by the Phoenix Building and Construction Trades Council. The wages and working rules for electricians are shown thereon. The agreement expired May 31, 1957. Effective June 1, 1957, a new 1-year agreement was made which was quite similar to the 1956 agreement.

7. At the expiration of the 1957 agreement, a new agreement was negotiated between the International Brotherhood of Electrical Workers and the National Electrical Contractor's Association, Arizona Chapter, for the period June 20, 1958, to June 20, 1959. The pertinent provisions of the labor agreements, effective during 1958 and 1959, published by the Phoenix Building and Construction Trades Council (October 17, 1958 transmittal date) is attached as exhibit B. The 1958–59 electricians' agreement was substantially different from the previous agreements in that it discontinued previous provisions for payment of subsistence in the form of board and lodging or per diem allowances, and instead of uniform statewide wage rates for electricians, it provided for a system of variable wage-rate zones with wages of $3.80, $4.175, $4.55, and $4.90 per hour for zones A, B, C, and D, respectively. The boundaries of the zones were set out in the agreement and, in general, zone A was within 16 miles of the city hall of any city in which the union maintained an office; zone B extended 16 miles beyond zone A; zone C extended 16 miles beyond zone B; and zone D included everything outside zone C. The nearest union office to Glen Canyon Dam is at Flagstaff, Ariz., some 130 miles by road. Accordingly, Page, Ariz., and Glen Canyon Dam site were entirely within zone D, and, therefore, called for a rate of $4.90 per hour, or $1.10 per hour higher than the rates in the A zones.

8. In preparation for computation of escalation payments, which were to commence with the first full weekly pay period after May 31, 1959, the Government, on May 15, 1959, advised the contractor of the base rates it would use in computing the adjustments. The contractor was advised that the rates being paid electricians contained a component of $1.10 per hour in lieu of daily subsistence payments, and that this component would be deducted from the gross wages before computing the adjustment for changes in cost. On this basis, the escalation would be 85 percent of $0.475 per hour ($3.80, representing the A zone rate, minus $3.325, being the base rate contained in the specifications), rather than 85 percent of the $1.575 per hour ($4.90, being the zone D rate, minus the base rate of $3.325) as requested by the contractor. A copy of the May 15, 1959, letter is attached as exhibit C. Also attached as exhibit D, is a copy of the contractor's reply of May 25, 1959, protesting the ruling in the letter of May 15, and denying that the rate of $4.90 per hour contained any subsistence component. By letter of June 29, 1959, the Government reaffirmed the position taken in the May 15, 1959, letter, that is, that $1.10 of the hourly rate being paid electricians was in lieu of subsistence and would be deducted in accordance with the provision of paragraph 19, providing that in computing the adjustment, subsistence payments (among certain other types of payments or fringe benefits) would not be considered. A copy of the letter of June 29, 1959, is attached as exhibit E.

9. Under the provisions of paragraph 19 of the specifications, the contractor submitted his payrolls for computation of adjustment for changes in cost. On the payroll of Morgan Electric Co. (the contractor's electrical subcontractor)

for the period beginning July 7, 1958, the rate for electricians was increased from the rate of $3.45 per hour established in the 1957–58 contract to $4.90 per hour, and the previous subsistence payments were discontinued and were no longer shown on the payrolls.

10. Actually, the subsistence component of $1.10 per hour amounts to somewhat less on the basis of a 40-hour week than the previous $7 per day. Subsistence amounts to $44 per week under the new agreement as compared to $49 per week under the previous agreement. An examination of the subcontractor's payrolls at Page, Ariz., before and after the June 20, 1958, agreement became effective, show the following wage computations:

Before June 20, 1958:	
40 hours at $3.45 per hour	$138
7 days' expense allowance at $7 per day	49
Total compensation for 1 week	187
After June 20, 1958:	
40 hours at $4.90 per hour	196
Expense allowance	0
Total compensation for 1 week	196

If the contractor were entitled to escalation paid on the full $4.90 per hour wage rate as he contends, the escalation would be as follows: 85 percent times 40 hours times $1.575 ($4.90 minus $3.325) or $53.55. The contractor's net labor cost would be $196 less $53.55 or $142.45. At the start of work under the contract, the total compensation for an electrician for a 40-hour week was:

40 hours at $3.325	$133
7 days' subsistence at $7 per day	49
Total compensation for 1 week	182

It is obvious, therefore, that under the contractor's interpretation of the contract, he would be paying out of his own pocket substantially less for electrician labor now than he was paying at the start of work under the contract.

11. By letter of July 9, 1959, the contractor appealed to the Secretary of the Interior from the adverse ruling. A copy of the contractor's letter of July 9, 1959, and enclosed appeal is attached and marked "Exhibit F." In a letter dated August 4, 1959, the contractor was advised that the appeal was premature inasmuch as the contracting officer had not issued a written decision on the question, but that a finding of fact would be prepared and issued.

12. In his letter of May 25, 1959, the contractor cites several Bureau of Reclamation specifications, covering work at or near Page, Ariz., which contain minimum rates of $4.90 for electricians and linemen. These citations are correct. They all involve work advertised after the NECA–IBEW agreement of June 20, 1958. As stated by the contractor, the Secretary of Labor has determined that these rates are now the prevailing wage rates for these classifications at Page, Ariz. The contractor attempts to establish that he is required by law to pay the rates set out by the Secretary of Labor in these later decisions. Such a position is clearly not in accordance with the requirements of the law or of the contract. The contractor, under the terms of his contract with the Government is required to pay the minimum wages set out in his contract. He is not required by any provision of the contract to pay the rates set out in subsequent decisions of the Secretary of Labor. In the present instance, the decisions of the Secretary of Labor were based on the wage rates then being paid by the contractor under this contract. Consequently, the decisions of the Secretary of Labor can have no bearing on the question of whether, under this contract, the wage rates include a component for subsistence or other benefits.

13. Paragraph 19 of the specifications expressly excludes any adjustment for "payments in the form of bonus, incentive payments, or gratuities, subsistence payments, and travel allowances." Inasmuch as increasing hourly rates were made applicable to the zones as the distance from the starting point (zone A) increased, it is the conclusion of the contracting officer that the increment over the basic wage rate payable for work in zone A comprises payments for either "subsistence," "incentive payments," or "travel allowances," none of which is subject to adjustment for changes in cost under the contract. The contractor's claim for adjustment for changes in cost for that part of the wage rates paid to

electricians which is in excess of the wage rates applicable in zone A, as above described, is therefore denied.

It may be noted as a practical matter that at the time the contractor submitted his bid, it was the practice in the field of electrical work that the electrical workers employed on construction projects ordinarily received subsistence when working at points removed from a union office, irrespective of the length of the job, the availability of housing at the site of the work, or any other factors. The contractor has never advanced any contention that he had any expectation at the time the job was bid that the requirement for paying subsistence would be discontinued, and the contractor's bid must necessarily have contained a component for payment of subsistence throughout the life of the job.

WORKERS OF THE FIVE BASIC CRAFTS

14. The contractor's other claim stems from the $0.50-per-hour increase negotiated with the five basic crafts as a settlement of the strike at the project, which was in effect from July 6, 1959, to January 4, 1960. The strike was called as a result of the contractor's refusal to pay an "expense allowance" as defined in the current Arizona master labor agreement, and settlement of the strike was achieved by the contractor's agreement to a $0.50-per-hour increase above other increases negotiated on a statewide basis. Merritt-Chapman & Scott Corp.'s agreement with the five basic crafts does not provide for an "expense allowance" which is in effect for all other jobs manned with union labor away from "basing point" cities.

15. During a conference in Denver, Colo., on December 18, 1959, the contractor's representatives advised the contracting officer that when they entered on the work, they expected to operate under the terms of their national agreements with the union which represent four of the five basic crafts. Representatives of the contractor have stated that it is quite common for contractors whose operations extend across the jurisdiction of various local unions to enter into more or less standard form agreements with the international and national unions. The contractor had had such agreements for many years. In general, these national agreements simply provide that where the contractor moves into an area where there are in existence agreements between the local union and a recognized contractor's bargaining agency, the contractor will comply with the wage rates and working rules contained in such agreements.

16. In Arizona there was in existence a statewide master labor agreement between the unions representing the five basic crafts and the Associated General Contractors. Although Merritt-Chapman & Scott had expected to operate under the terms of its national agreements, and did not anticipate becoming a signatory party to the existing State master labor agreements, this procedure was not permitted by the local Arizona unions. The practice in this regard varies throughout the country, with most local unions accepting contractors from other jurisdictions merely on the basis of the contractor having executed a contract with the national unions while some locals will not permit a contractor to operate as a union contractor until he has actually signed the existing local agreement. When Merritt-Chapman & Scott contacted the local unions with regard to making arrangements for a supply of labor for the job, the contractor was requried to sign the Arizona master labor agreements as a condition to the unions furnishing labor.

The Teamsters Union does not enter into national agreements, and it was necessary, therefore, for Merritt-Chapman & Scott to sign a local agreement with the Teamsters in any event. This agreement was signed in June 1957.

17. The Arizona master labor agreement between the Associated General Contractors, Arizona chapter, and the Building and Construction Trade Unions, effective June 1, 1955, to May 31, 1959, applicable to the five basic trades of carpenters, laborers, teamsters, operating engineers, and cement masons, under article XIV, contains a remote projects provision quoted as follows:

"A. It is mutually recognized that remote projects frequently involve special living accommodation problems. A special committee shall be appointed composed of three contractor representatives and three representatives of the unions, together with an ex officio representative of both parties, which committee shall investigate and make decision binding on the parties with reference to establishment of construction projects as remote.

"B. When a project is established as remote, as provided in the preceding paragraph, contractors shall have the option of providing a camp at the jobsite or providing adequate free transportation for employees from the nearest town where suitable living accommodations are available. If a camp is provided, the contractor shall not charge employees for board and room facilities. Where the con-

tractor elects to provide transportation, any travel time shall be paid for at the regular straight-time rate of the employee as a travel-time allowance.

"C. Appeal from decisions of this committee may be made to the joint conference board in the same manner as provided for appeals from area joint labor-management committees under provisions of article V of the agreement. Remote project committee members shall be appointed within 15 days ater this agreement has been signed."

The remote projects committee established under the above provision, designated the Glen Canyon project as remote on December 12, 1956, and advised that the project would remain remote until 30 days after the remote projects committee finds that residential housing facilities are available for those employees who wish to avail themselves of these facilities. The resolution was as follows:

"The Glen Canyon project shall be remote until 30 days after the contractor had notified the remote projects committee and the committee finds that residential housing facilities are available for those employees who wish to avail themselves of these facilities."

18. The above-mentioned decision of the remote projects committee required that free board and room be furnished employees of the five basic crafts until such time as the project might be declared no longer remote. The contractor conformed to this ruling; however, there came a time in late 1957 when the contractor requested the remote projects committee to declare the project to be no longer "remote," and to relieve him of the obligation to furnish free room and board. The contractor's position was that at his own expense he had provided residential facilities for his employees such that the job site could no longer be considered as "remote" within the meaning of the language of the labor agreement. The remote projects committee vote on the contractor's request resulted in a tie and, in accordance with the provisions of the agreement, the contractor exercised his right of appeal to the State joint conference board. Because of a vote tie also by the State joint conference board, the question was submitted to arbitration. The representatives of the parties defined the issue to be presented to the arbitrator as follows:

"Has the contractor made residential facilities available at Glen Canyon project for those employees who wish to avail themselves thereof as contemplated by the resolution adopted by the remote projects committee on December 12, 1956?"

The arbitrator's award, dated May 20, 1958, was as follows:

"The contractor has not made residential facilities available at Glen Canyon project for those employees who wish to avail themselves thereof as contemplated by the resolution adopted by the remote projects committee on December 12, 1956."

19. After the contractor had taken steps in an effort to cure deficiencies as found by the arbitrator, he again sought to have the project removed from the "remote" classification, and there again followed arbitration proceedings. In this proceeding, the question was defined by the parties as follows:

Has the contractor made residential facilities available at Glen Canyon project for those employees who wish to avail themselves thereof as contemplated by the resolution adopted by the remote projects committee on December 12, 1956?"

The arbitrator, on January 15, 1959, ruled on the question: "Yes; as of the date of this award." The contractor then advised his employees that free board and room facilities would cease on January 25, 1959. Members of the five basic crafts walked off the job at 2 p.m. on January 22 in protest to discontinuance of free room and board benefits. This action resulted in the job being shut down except for operation of the powerplant, even though the walkout was not authorized by the union. Certain workers who had left the job started returning to work on February 2, 1959, and continued reporting until full operations were resumed shortly thereafter.

20. Negotiations with respect to the five basic construction crafts in the State of Arizona for a new contract or an extension of the existing contract which was to expire May 31, 1959, began in October 1958 between the Arizona Building and Construction Trades Unions and the Associated General Contractors, Arizona chapter. A provision of the above-mentioned national agreements (par. 15) stipulates that with regard to new labor contracts, the contractor shall have an opportunity to participate in negotiations. Officials of Merritt-Chapman & Scott were invited to participate in the negotiations but declined on the ground, as representatives of Merritt-Chapman & Scott have stated, that since the existing master labor agreement did not expire until May 1959, it was much too early to begin negotiations. Merritt-Chapman & Scott did not elect to participate as a

party to these negotiations at any later stage and statewide labor agreements were ultimately entered into without their formal participation.

21. In connection with the negotiations between the unions and the Associated General Contractors, the operating engineers and other crafts were proposing to delete the remote projects provisions as contained in the earlier contract and establish zones with different hourly wage rates for each zone similar to the arrangement negotiated earlier by the electricians as discussed above. As a result of negotiations that had been commenced in October 1958, a new 3-year Arizona master labor agreement effective June 1, 1959, covering four of the basic construction crafts (operating engineers excluded) was reached early in May 1959. Agreement with the operating engineers was reached and signed on July 28, 1959, but such agreement was made retroactive to June 1, 1959. Pertinent provisions of these agreements are contained in exhibit G, titled "Phoenix Building and Construction Trades Council Affiliated Crafts, Wage Schedule, Overtime, Travel Expense and Subistence Provisions." These agreements cover the entire State of Arizona, and did not exclude the Glen Canyon Dam area as the contractor had previously advised he intended to request the negotiating parties to do. The new agreement did not provide for varying wage rates for different zones as originally contended for by the unions, but did provide for varying rates for subsistence in various zones as discussed in detail below.

22. The new agreement provides for wage rate increases of $0.18 per hour on June 1, 1959, and additional increases of $0.20 per hour effective June 1, 1960, and June 1, 1961, as well as other benefits. The remote projects clause contained in the earlier agreement was discontinued and new provisions were included with regard to expense allowance, or subsistence. Thus, article XIII, in the case of the operating engineers, and the identical article XIV, in the case of laborers, carpenters, teamsters, and cement masons, establishes 12 named cities in Arizona as basing points and provides for payment of an expense allowance of $2, $4, and $6 per day, respectively, for work performed in so-called zones 2, 3, and 4, which zones are varying stated distances from established basing points. The basing point cities with surrounding area of 20 miles, or in some cases 30 miles, are designated as zone 1, and no expense allowance is required for work performed within such a zone. The pertinent language of the agreements relating to the expense allowance is as follows.

"EXPENSE ALLOWANCE

"As an approximately reasonable reimbursement for expenses incurred, a monetary allowance shall be paid for each day worked under the following conditions:"

There follows a description of the zones and the amount of expense allowance to be paid in each zone. Under the above zone designations, Page, Ariz., and the Glen Canyon Dam site, being some 130 miles from Flagstaff, Ariz., the nearest zone 1 city, are in zone 4, and therefore require the payment of the maximum $6 per day expense allowance in addition to the regular wage payments.

23. Although, as previously indicated, the labor agreement with the five basic crafts expired on May 31, 1959, employees under these crafts reported to work on June 1, at Glen Canyon Dam. The contractor's project manager agreed with local labor representatives to pay the new basic wage rates established by labor and the Arizona general contractors, and agreed that Merritt-Chapman & Scott would negotiate by June 17 or some other mutually accepted date, a job agreement for Glen Canyon Dam. The contractor issued a press release late in May of 1959, copy of which is attached and marked "Exhibit H," stating his willingness to accept all provisions of the new Arizona master labor agreement except the provision requiring a "premium 'subsistence' allowance." Work continued through June with reduced forces and until 6 a.m. on July 6, 1959, during which period no subsistence was paid by the contractor. At that time, as a result of a unanimous resolution adopted by the Arizona labor unions in late June 1959, copy of which is attached marked "Exhibit I," the job was picketed because it was contended that the contractor had been and was then in violation of its collective bargaining agreement. This was based upon the union's position that the above-mentioned agreements with the parent international and national organizations of the local unions required the contractor to abide by the terms of the State agreements, and the contractor was thus obligated to pay subsistence as provided for in the State agreements. Pickets were established at the job and all crafts except those necessary for maintenance ceased work. This was notwithstanding the fact that the union, in its letter of March 27, 1959, invited the contractor to negotiate a new agreement inasmuch as the 1955 agreement was about to expire. A copy of the March 27, 1959, letter is attached as exhibit J.

24. Work on other construction jobs throughout the State of Arizona was shut down during the early part of June 1959 due to the fact that no new agreement had been negotiated between the Arizona Chapter of the Associated General Contractors and the Operating Engineers Union. Work under these other jobs throughout the States was resumed late in July after an agreement had been reached between the contractor's organization and the operating engineers. Work under the Merritt-Chapman & Scott contract with the Bureau of Reclamation remained shut down until January 4, 1960.

25. Messrs. Frank Barnes and Clare Helmer, representatives of Merritt-Chapman & Scott, called at the office of the contracting officer in Denver, Colo., on July 14, 1959. During this visit all aspects of the strike at Glen Canyon Dam were discussed and the contractor's representatives reiterated the position that the contractor was not in violation of any collective bargaining agreement. The representatives advised that the contractor was not a party to the new Arizona master labor agreement, and that they operated under national agreements with the crafts involved. These representatives also stated the contractor's willingness to accept all provisions of the new State agreement except the provision for expense allowance pay. In this connection, they advised that the contractor had expended some $2,500,000 in providing facilities to remove the remote status and had been successful in January of 1959 in getting the remote projects status removed. The contracting officer was asked if the Bureau would make adjustment for wages paid in excess of those applicable under the Arizona master labor agreement provided the contractor ultimately negotiated a job agreement with labor for an increase in hourly wages without a subsistence pay requirement. In response to this request, the contracting officer advised that he would render a decision in the matter upon presentation of a firm agreement reached with labor, but advised the representatives that the contract did not, in his opinion, authorize or permit adjustment for any form of subsistence payments.

26. Between September and December 1959, several conferences were held and a considerable amount of correspondence was exchanged between the Government and the contractor exploring possible means of resolving the impasse created by the protracted work stoppage. A meeting was held in Washington, D.C., on September 11, at which the contractor presented the Government with a letter dated September 10, 1959, a copy of which is attached marked "Exhibit K." According to this letter, the unions had indicated a willingness to settle the strike and return to work on the basis of wage rates involving $0.50 per hour increase over the wages provided for in the recently signed statewide master labor agreements. The proposed agreement would contain no provision for a separate subsistence or expense allowance component such as was provided in the statewide agreements. The contractor requested that he be advised as to whether, if he entered into such an agreement, the Government would consider the increased wage rates resulting from the $0.50 per hour component subject to escalation under paragraph 19 of the specifications.

27. At the time of the September conference, the existence of the work stoppage at Glen Canyon Dam, with no apparent prospect of settlement of the dispute, presented the Government with extremely serious problems. There was the problem of what to do as to continuation of the employment of its own personnel at the job site. Also, there was the matter of potential financial losses due to possible postponement of the time when the project would commence to earn revenue. Accordingly, wholly apart from the question of whether the contractor was entitled to escalation, overtures were made to the contractor looking toward an agreement between the parties as to the Government's assuming some part of the proposed $0.50 per hour component as an inducement to the contractor to negotiate a settlement of the strike and resume work. This proposal was submitted to the contractor by letter dated September 22, 1959, a copy of which is attached marked "Exhibit L." However, the Government's intention apparently was misunderstood by the contractor as the contractor replied, by letter dated September 24, 1959 (exhibit M), contending that the Government was refusing to recognize its obligations under the contract by what the contractor construed as an admission by the Government that the contractor was entitled to escalation while at the same time expressing its unwillingness to escalate to the full 85 percent of increased wages as provided in paragraph 19 of the specifications. The Government by letter dated October 1, 1959, a copy of which is attached marked "Exhibit N," clarified its position that its willingness to negotiate concerning assumption of some portion of the $0.50 per hour wage rate component was based upon its interest in securing an earlier resumption of work at Glen

Canyon Dam and that its offer in no way involved any consideration of any rights the contractor might have under paragraph 19 of the specifications. The contractor was further advised that any attempt to determine the contractor's rights under paragraph 19 of the specifications as to any possible labor agreement would be premature until the contractor had presented the Government with a firm labor agreement. The Government then restated its willingness either to seek some mutually agreeable basis for resumption of the work, or in the alternative, to give prompt consideration to the contractor's right to escalation under any agreement he might see fit to negotiate with the unions and present to the Bureau. The contractor replied by letter dated October 15, 1959, a copy of which is attached marked "Exhibit O," and indicated that the alternatives offered by the Government were unacceptable, and that he would continue negotiations with the unions and present the results of such negotiations for Government's consideration.

28. Implicit in the Government's willingness to negotiate with the contractor in order to secure a resumption of work at Glen Canyon Dam was the premise that the delay caused by the strike would have to qualify as an excusable delay under the terms of the contract. It appeared to the Government that the agreements between the contractor and the international and national unions would necessarily have a bearing upon this determination. If it were determined that by the terms of the national agreements the contractor was bound to abide by whatever agreements the Associated General Contractors as bargaining agent for the contracting industry and the local Arizona unions should enter into, then, of course, instead of a strike, the work stoppage at Glen Canyon Dam would be the result of a lockout. Delays occasioned by a lockout would not be excusable and protracted delays due to such a cause would, of course, place the contractor in default of the contract with the Government. The contractor was, therefore, requested to furnish copies of the national agreements for the Government's consideration. The contractor for a considerable time objected to furnishing these agreements, contending that they had no bearing on the problem; but eventually the agreements were furnished. When the agreements were submitted, the contractor's representatives advised that there was considerable variance in the practice among the various union jurisdictions as to whether the local unions would permit a contractor to operate as a union contractor without his first signing local agreements; that such national agreements, even though providing in general terms that the contractor agreed to pay the wages and observe the working conditions established by local agreements, were not recognized between the parties as binding contractual commitments where the local unions declined to operate under the national agreements and that in this case the local unions in Arizona, notwithstanding the existence of the national agreements, required Merritt-Chapman & Scott to sign the then existing local agreements in June 1957 as a condition to operating as a union contractor in Arizona.

29. During these discussions between the contractor and the Government there was pending before the Arizona Employment Security Commission a claim by the unions for unemployment compensation for their members who were unemployed as a result of the work stoppage at Glen Canyon Dam. The right of the employees to compensation turned upon the question of whether the work stoppage was a strike or a lockout. If Merritt-Chapman & Scott was automatically bound by the terms of its national labor agreements to abide by the terms of local agreements, then the work stoppage amounted to a lockout, and the workmen would be entitled to unemployment compensation. In the State employment security commission proceedings, Merritt-Chapman & Scott urged that they were not bound by the terms of the national agreements to abide by the newly negotiated State master labor agreements, establishing in support thereof that at the outset of the job the local unions had required that Merritt-Chapman & Scott become a signator of the then existing Arizona master labor agreement. On December 11, 1959, the Arizona Employment Security Commission affirmed a decision dated September 26, 1959, by the special deputy of the employment security commission against the unions, holding that the work stoppage constituted a strike, and accepting the contention of Merritt-Chapman & Scott that the national agreements did not bind Merritt-Chapman & Scott to observe the new statewide labor agreements.

30. By letter dated October 38, 1959 (copy without enclosures enclosed as exhibit P), the contractor forwarded to the Government drafts of agreements which they advised the unions would require them to accept if work was to be resumed at the project. The Government replied by letter dated November 6, 1959, copy attached as exhibit Q, again stating that the contracting officer could

not make a determination regarding reimbursement under the escalation paragraph until a labor agreement had been executed. By letter dated December 23, 1959, the contractor forwarded to the Government copies of labor agreements dated December 22, 1959, which he had negotiated and executed with the five basic crafts. Copies of the letter and enclosures are attached as exhibit R. These agreements are substantially the same as the Arizona master labor agreements, except that the wage rates specified therein are uniformly $0.50 per hour higher than the wage rates provided for in the Arizona master labor agreements, and the provision in the State agreements for a per diem expense allowance on a graduated rate basis by zones has been deleted. The contractor has requested that the Government compute the payments for adjustment for changes in cost on the basis of the new wage rates (including the $0.50 per hour component).

31. In passing on the contractor's claim for escalation, it is necessary that consideration be given not only to the provision of paragraph 19 for adjustment for increases in hourly wage rates, but that consideration be given to certain exclusions also contained in specifications paragraph 19. In this connection, the third paragraph of specifications paragraph 19 provides as follows:

"In computing the adjustment in compensation to be made under this paragraph, illegal working time of laborers and mechanics; payments in the form of bonus, incentive payments, or gratuities, subsistence payments, and travel allowances; and all costs of compensation insurance and other direct or indirect charges, contributions, or taxes, either State or Federal, applying to payrolls will not be considered."

I now proceed to the determination of the question as to what extent, if any, does the $0.50 per hour component include elements of subsistence or other items excluded by the third subparagraph of specifications paragraph 19.

32. The strike by the unions was called because the contractor refused to pay subsistence as provided for by the statewide labor agreements. The unions were perfectly willing to work for the standard statewide prevailing hourly wage rates. However, they demanded that the contractor pay an expense allowance or subsistence when working at Glen Canyon Dam of $6 per day as provided for in the statewide agreement and as payable by other union contractors. The so-called wage rates now agreed to by the contractor are $0.50 per hour higher than the standard statewide hourly wage scale, and there is no mention of subsistence as a separate item of labor cost, as is provided for by the statewide agreements. This is the only substantial difference between the agreements signed by Merritt-Chapman & Scott and the statewide agreements binding upon all other union contractors in the State of Arizona.

33. It is the position of Merritt-Chapman & Scott that they were a free agent in conducting their own labor negotiations independently with the unions. This is predicated upon their contention that the national and international agreements with four of the five unions do not have the effect of automatically subjecting Merritt-Chapman & Scott to the terms and conditions of the statewide agreements. I do not deem it necessary to pass upon the legal question involved, since under the factual determination reached hereinafter, even if it were conceded that Merritt-Chapman & Scott was a free agent and was not bound by the national and international agreements, the claim presented is one involving payment of subsistence. Even if Merritt-Chapman & Scott was not bound by the statewide agreements, the negotiations between the parties to that agreement and the resulting contract may properly be considered as evidence bearing upon the nature of the additional 50 cents per hour component subsequently agreed to between Merritt-Chapman & Scott and the unions. It is in this connection that the significance of the statewide agreeements will be considered in this findings.

34. At the time of the industry-labor negotiations, the question of whether Page, Ariz., should be designated as a free city was the subject of extensive negotiation, and in fact, this was the last remaining issue between industry and the four crafts before agreement was reached early in May 1959. Although Merritt-Chapman & Scott was not a formal party to these negotiations, it is established by testimony before the State employment security commission that they were kept informed as to developments in the negotiations. Whether right or wrong, the unions have never accepted the arbitrator's decision as regards the removal of Page, Ariz., from remote status as a reasonable and justifiable decision, and it is evident that they were determined to exert maximum effort to overcome the effects of this decision in the negotiation of the new statewide agreements. It may be noted in passing that the arbitrator's decision did not purport to establish the status of Page, Ariz., as permanently nonremote, but merely found that as of the date of the arbitration it was nonremote. In his opinion, the arbitrator stated: "With the range and quality

of housing options now available, I conclude that this aspect of the RPC [Remote Projects Committee] resolution has been met. If serious future shortages were again to develop, these alone would justify restoration or remote status." Thus, this status was subject to change under the then existing statewide agreement if the unions could establish at any point of time that there was insufficient residential housing available for workers who might desire such facilities.

35. The matter of whether Page, Ariz., was a remote area, or an area where subsistence would be required to be paid to workmen was a completely open question insofar as the negotiation of the new labor agreements was concerned. During these negotiations union representatives took a strong position that their members were entitled to subsistence for work performed at Glen Canyon Dam. The unions had in mind the particular situation of Merritt-Chapman & Scott as the principal employer of labor at Glen Canyon Dam when, in the industry-labor negotiations, they refused to yield on their position that subsistence should be paid at Glen Canyon Dam, and they therefore would not accede to the industry position that Page, Ariz., should be designated as an additional free city.

36. The unions at the time of the negotiation of the new agreements had no intention but that Merritt-Chapman & Scott would be required to accede to payment of subsistence if they desired to operate as a union contractor. This follows from the fact that in executing the statewide agreements, the unions, for practical purposes, put it beyond their power to negotiate a more favorable contract with Merritt-Chapman & Scott, even if Merritt-Chapman & Scott were a free agent, a matter upon which, as above stated, it is unnecessary for me to pass. In this connection, the Arizona master labor agreements contain a provision referred to as the "favored nation" clause which is quoted as follows:

"That in no event shall the contractors be required to pay higher rates of wages, or be subject to more unfavorable working rules than those established by the respective unions for any other employer engaged in similar work in Arizona."

The effect of this provision, is that if the unions should enter into an agreement with any other contractor affording that contractor any more favorable terms than those contained in the master agreements, then all contractors bound by the master agreements would immediately and automatically become entitled to the more favorable terms. Thus, unless the unions intended to deny "free city" status to Merritt-Chapman & Scott in the separate negotiations, it would have been an idle act to insist in the negotiations with industry, that Page should not be a free city, since under the "favored nation" clause, Page would become a free city to all contractors if the unions should subsequently make similar concessions to Merritt-Chapman & Scott.

37. As has been stated above, Merritt-Chapman & Scott elected not to participate in the industry-union negotiation looking toward the formulation of a new statewide agreement. When these negotiations were in progress, Merritt-Chapman & Scott, as an experienced contractor, knew the consequences that would attend the signing of the statewide agreement, whether or not from a technical legal standpoint it was binding upon them. Thus, when statewide agreements were executed, Merritt-Chapman & Scott knew, in view of the "favored nation" clause and from usual practice in labor negotiations that it would be beyond the power of the unions, at least without extending those identical concessions to all other contractors, to grant it more favorable terms than those contained in the statewide agreements. Accordingly, once a subsistence component had been included in the cost of labor at Page, Ariz., under the terms of statewide agreements, the character of the Page, Ariz., area as a subsistence area was firmly and conclusively established The only way Merritt-Chapman & Scott could have hoped to avoid the payments of subsistence or some other monetary compensation in lieu thereof such as would involve no violation of the "favored nation" clause was to join in the industry-labor negotiations, and in those negotiations to secure such recognition as it could of the special status it claimed it merited. Having elected not to participate in these negotiations, Merritt-Chapman & Scott in the circumstances here involved, cannot now be heard to claim that the special 50-cent per hour component which it agreed to with the unions is something other than subsistence. If, as the contractor contends, there was no reasonable basis for a union demand for subsistence, then there was even less basis for a payment of higher hourly wage rates by Merritt-Chapman & Scott than those paid by other contractors. In fact, it would appear that if the unions had themselves made any demand for higher hourly wage rates (and the contractor has never alleged that it was met by any demand of higher hourly wage rates in any connection other than as an alternative to subsistence), those demands would clearly have been in violation of the terms of the national and

international agreements in the case of the four unions where such agreements were in existence.

38. The character of Page, Ariz., as a subsistence area, was firmly established by the statewide negotiations. Once these agreements had taken form, there was not, from a practical standpoint, anything Merritt-Chapman & Scott could do in independent negotiations to change this status. Whether Merritt-Chapman & Scott, as an abstract matter, should have received some special recognition as regards the subsistence issue by reason of its expenditures in providing housing and other facilities at Page, Ariz., is of no moment. Merritt-Chapman & Scott has advanced no reason why it should be subjected to higher hourly wage rates than other contractors and the only reason that could be advanced is that the additional wage rate component is in settlement of the issue of subsistence, and, insofar as the unions were concerned, this payment of a so-called additional wage component placed them in position to avoid violation of the "favored nation" clause of the contract. It is significant in this connection that the unions required a letter from the contractor's counsel advising that in his opinion the agreement involved no violation of the "favored nation" clause as a condition to their execution of the agreement. This avenue of settlement of the subsistence issue was seized on by the contractor only in an effort to shift a large share of the cost from their own shoulders to the Government under the escalation clause. But the escalation clause does not provide for reimbursement of any payments to labor that are nominally in the form of hourly wage rates, but which are, in fact, subsistence.

39. In view of the facts and circumstances, as stated above, I find that the amount by which the so-called hourly wages paid by the contractor to the workers of the five basic crafts in accordance with the December 22, 1959, agreements exceeds the basic wage rates paid by other contractors in the State of Arizona constitutes a subsistence payment and therefore is not subject to escalation as provided in paragraph 19, "Adjustments for changes in cost."

SUMMARY

40. I find that insofar as the electrical workers are concerned, the difference in wage rates between the A zones and D zones is a payment of subsistence, and this portion of the wages paid to electrical workers is therefore not subject to escalation. I find that payments to workers of the five basic crafts in excess of the rates established by the Arizona master labor agreements are payments of subsistence and the excess amounts are not subject to escalation.

41. A copy of this findings of fact and decision is being transmitted to the contractor with attention being invited to the right of appeal within 30 days, as provided in clause 6 of the general provisions of the contract. Such appeal, if made, should be addressed to the Board of Appeals, Office of the Solicitor, Department of the Interior, and should be mailed to or filed with the contracting officer for transmittal to the Board. A copy of the regulations governing contract appeals is attached.

GRANT BLOODGOOD,
Assistant Commissioner and Chief Engineer (Contracting Officer).

COMPTROLLER GENERAL OF THE UNITED STATES,
Washington, April 1, 1960.

B-142040

The Honorable the SECRETARY OF THE INTERIOR.

DEAR MR. SECRETARY: Reference is made to a letter dated February 16, 1960, with enclosures, from the Administrative Assistant Secretary (supplemented by letter of March 3, 1960, and enclosures), requesting our decision respecting the legality of certain claims asserted by the Merritt-Chapman & Scott Corp. under contract No. 14-06-D-2403, dated April 29, 1957, as amended, for the construction of the Glen Canyon Dam under specifications No. DC-4825, Colorado River storage project.

With the letter of February 16, 1960, there was enclosed a copy of a memorandum dated February 2, 1960, from the Acting Assistant Commissioner and Chief Engineer, Bureau of Reclamation, wherein the factual background of the contractor's claims was set forth at length and wherein it was recommended that the matter be submitted to our Office for a decision.

The record indicates that the contractor submitted two claims for wage escalation under the contract, the first claim being for escalation of wages paid to elec-

trical workers and the second claim being for escalation of wages paid to workers of the so-called basic construction crafts, that is to say, carpenters, teamsters, operating engineers, cement masons, and laborers. The Acting Assistant Commissioner estimated that if the contractor is entitled to escalation on the basis claimed on all classifications of labor the total payments thereunder will eventually amount to upward of $3 million.

The question presented for consideration with respect to each of the above claims appears to be whether a component of hourly wage provided for in the applicable union contract is not actually a subsistence payment which is expressly excluded from escalation, rather than an increase in hourly wage that is subject to escalation under the provisions of paragraph 19 of the specifications. The cited paragraph 19 provides, in part, as follows:

"19. *Adjustment for changes in cost.*—All monthly estimates for payments, as provided in clause No. 7 of the general provisions, made for work performed during the first full weekly pay period after May 31, 1959, and thereafter, will be subjected to adjustment to compensate for changes either upward or downward in the amount of wages paid to laborers and mechanics.

"The amounts due under the contract will be adjusted by the amount of 85 percent of the difference between the total amount of wages actually paid to laborers and mechanics employed under the contract or any construction subcontract, and the total amount of wages that would have been paid if computed at hourly base rates determined as follows: * * *.

"In computing the adjustment in compensation to be made under this paragraph, illegal working time of laborers and mechanics; payments in the form of bonuses, incentive payments, or gratuities, subsistence payments, and travel allowances; and all costs of compensation insurance and other direct or indirect charges, contributions, or taxes, either State or Federal, applying to payrolls will not be considered."

At the time bids for the Glen Canyon Dam were received, daily subsistence at the rate of $7 per day was required to be paid to electricians who might work at the construction site unless the contractor furnished free board and lodging. The labor agreement prescribing these conditions expired on May 31, 1957. The 1958–59 electricians agreement was substantially different from the previous agreement in that it discontinued previous provisions for payment of subsistence in the form of board and lodging or per diem allowances, and instead of uniform statewide wage rates for electricians, it provided for a system of variable wage-rate zones with wages at stipulated hourly rates, ranging from $3.80 per hour in designated cities to $4.90 per hour in areas most remote from such cities. The contract project was in the most remote area.

In preparation for the computation of escalation payments under the provisions of the above-quoted paragraph, the Government on May 15, 1959, advised the contractor of its view that the rates being paid electricians contained a component of $1.10 per hour (the difference between the $4.90 and $3.80 rates) in lieu of daily subsistence payments, and that this component would be deducted from the gross wages before computing the adjustments for changes in cost. The contractor replied by letter of May 25, 1959, protesting the ruling in the letter of May 15 and denying that the rate of $4.90 per hour contained any subsistence component. By letter of June 29, 1959, to the contractor, the Government reaffirmed the position taken in the letter of May 15, 1959. The contractor promptly noted an appeal from this ruling, but was advised that the appeal was premature and that proper findings would be furnished at a later time.

In view of the simultaneous discontinuance of daily subsistence payment, and the addition of a component of $1.10 per hour to the wage scale in the remote zone over the wage scale established in the city zones, the Acting Assistant Commissioner expresses the opinion that the Government is not legally liable for payment of escalation on the $1.10-per-hour component within the meaning of paragraph 19 of the specifications. On page 5 of his memorandum there is set forth a computation showing that if the contractor is entitled to escalation upon the full difference between the $4.90-per-hour wage rate and the minimum basic rate fixed by the contract, as it contends, then it will be paying out of his own pocket substantially less for electricians' work than it was paying at the start of the work under the contract. The contractor contends that largely by reason of substantial expenditures by it for housing and other community facilities and services the project site has become one of the 12 largest communities in Arizona and that there is no justification for payment of subsistence or other expenses to workers on the project.

The second problem concerns the determination of the proper amounts to be considered for escalation in connection with the payments made to workers of the

five basic construction crafts hereinbefore referred to, and presents the same question as to whether certain amounts paid these workers in the form of increases in hourly wage rates are not actually subsistence payments, and therefore excluded from escalation.

The contractor advised the contracting officer that when it entered on the work it expected to operate under the terms of its national agreements with the unions representing four of the five basic crafts. It is reported that it is quite common for contractors whose operations extend across the jurisdiction of various local unions to enter into more or less standard form agreements with the international and national unions, and that the contractor in this case had had such agreements for many years. In general, these national agreements provide that where the contractor moves into an area where there are in existence agreements between the local union and a recognized contractor's bargaining agency, the contractor will comply with the wage rates and working rules contained in such agreements.

At the time the subject contract was entered into, there was in effect in Arizona a master labor agreement between the building and construction trades unions and Arizona members of the Associated General Contractors, under which Merritt-Chapman & Scott operated until its expiration in May 1959. Pursuant to an appeal by the contractor under the terms of this agreement, an arbitrator ruled on January 15, 1959, that the Glen Canyon Dam project would no longer be considered a "remote area," requiring subsistence to be furnished to workers. Upon being advised by the contractor that free board and room facilities would cease on January 25, 1959, members of the five basic crafts walked off the job on January 22, 1959, and this resulted in the job being shut down for a short period except for the operation of the powerplant.

In October 1958, negotiations with respect to the five basic construction crafts in the State of Arizona for a new contract or an extension of the existing contract began between the Arizona Building & Construction Trade Union and the Arizona chapter of the Associated General Contractors. A provision of the national agreements stipulates that with regard to new labor contracts, the contractor should have an opportunity to participate in negotiations. Officials of Merritt-Chapman & Scott were invited to participate in the negotiations but declined to do so on the ground that since the existing master labor agreement did not expire until May 1959, it was too early to begin negotiations. Merritt-Chapman & Scott did not elect to join in the negotiations at any later stage, and statewide labor agreements were ultimately entered into without formal participation by that concern.

As the result of negotiations which had been commenced in October 1958, a new 3-year Arizona master labor agreement effective June 1, 1959, covering four of the basic construction crafts (operating engineers excluded) was reached prior to May 31, 1959. An agreement with the operating engineers, made retroactive to June 1, 1959, was signed on July 28, 1959. These agreements covered the entire State of Arizona and did not exclude the Glen Canyon Dam area as the contractor had previously advised it intended to request the negotiating parties to do. The new agreement did not provide for varying wage rates for different zones as originally contended for by the unions, but did provide for varying rates for subsistence in various zones. These provisions established 12 named cities in Arizona as basing points and provided for payment of expense allowances of $2, $4, and $6 per day for work performed in so-called zones 2, 3, and 4, respectively, which are varying distances from established basing points. No expense allowance was required to be paid in zone 1. Since the Glen Canyon Dam is in zone 4, payment of the maximum $6 per day expense allowance in addition to the regular wage payments would have been required if the agreement had been accepted by Merritt-Chapman & Scott.

It is reported that although the labor agreement with the five basic crafts had expired on May 31, 1959, employees under these crafts reported for work on June 1 at the Glen Canyon Dam. The contractor's project manager agreed with local labor representatives to pay the new basic wage rates established by labor and the Arizona General Contractors, and also agreed that the contractor would negotiate by June 17, or some other mutually acceptable date, a job agreement for the Glen Canyon Dam. The contractor issued a press release late in May of 1959 stating its willingness to accept all provisions of the new Arizona master labor agreement, except the provision requiring a "premium 'subsistence' allowance." Beginning on July 6, 1959, the job site was picketed because it was claimed that Merritt-Chapman & Scott had been and was then in violation of its collective bargaining agreement. This action was based upon the unions' position that the indicated agreements with the parent international and national organizations of the local unions required the contractor to abide by the terms of the State agreements.

Work on other construction jobs throughout the State of Arizona was shut down during the early part of June 1959 due to the fact that no new agreement had been negotiated between the Arizona chapter of the Associated General Contractors and the Operating Engineer's Union. Work under these other jobs throughout the State was resumed late in July following the reaching of an agreement between the contractor's organization and the operating engineers. It is reported, however, that the work under the Merritt-Chapman & Scott contract with the Bureau of Reclamation remained shut down until January 4, 1960.

Representatives of the contractor called at the office of the contracting officer in Denver, Colo., on July 14, 1959. During that visit all aspects of the strike at the Glen Canyon Dam were discussed and the contractor's representatives reiterated the position that the contractor was not in violation of any collective bargaining agreement, it being stated that the contractor was not a party to the Arizona master labor agreement, and that it operated under national agreements with the crafts involved. These representatives also indicated the contractor's willingness to accept all provisions of the new State agreement except the provision for expense allowance pay. In that connection, it was pointed out that the contractor had expended some $2,500,000 in providing facilities to remove the "remote status" and had been successful in January of 1959 in getting the remote projects status removed.

The contracting officer was asked if the Bureau of Reclamation would make adjustment for wages paid in excess of those applicable under the arizona master labor agreement provided the contractor ultimately negotiated a job agreement with labor for an increase in hourly wages without a subsistence pay requirement. The contracting officer replied to the effect that he would render a decision in the matter upon presentation of a firm agreement reached with labor, but advised the representatives that the contract did not, in his opinion, authorize or permit adjustments for any form of subsistence payments.

Between September and December of 1959, several conferences were held and considerable correspondence was exchanged between the Government and the contractor exploring possible means of resolving the impasse created by the protracted work stoppage. At a meeting held in Washington, D.C., on September 11, the contractor presented the Government with a letter dated September 10, 1959, to the effect that the unions had indicated a willingness to settle the strike and return to work on the basis of wage rates involving a $0.50 per hour increase over the wages provided in the recently signed statewide master labor agreements, but with no provision for a separate subsistence or expense allowance such as was provided in the statewide agreements. The contractor requested to be advised whether, if he entered into such agreement, the Government would consider the increased wage rates resulting from the $0.50 per hour component subject to escalation under paragraph 19 of the specifications.

Because of the Bureau's concern over the prolonged stoppage of work on the project, and the serious administrative problems created thereby, the Government representatives indicated their willingness either to enter into negotiations for the assumption by the Government of some portion of the proposed 50-cent wage component, or in the alternative, to give prompt consideration to the contractor's right to escalation under any agreement it might see fit to negotiate with the unions and present to the Bureau.

By letter of December 23, 1959, the contractor furnished to the Government copies of labor agreements dated December 22, 1959, which had been negotiated and executed with the five basic crafts. It is stated that these agreements are substantially the same as the Arizona master labor agreements, except that the wage rates specified therein are uniformly $0.50 per hour higher than the wage rates provided for in the Arizona master labor agreements, and the provision of the State agreements for a per diem expense allowance on a graduated rate basis by zones is omitted. The contractor requested that the Government compute the payments for adjustment for changes in cost on the basis of the new rates (including the $0.50 per hour component).

The Acting Assistant Commissioner points out that inherent in the contractor's claim for escalation is the contention that any expressed adjustment in labor costs, so long as it takes the form of hourly wage rate increases, is subject to escalation pursuant to paragraph 19 of the specifications. However, reference is made to the fact that the third paragraph of paragraph 19 expressly provides that in computing the adjustment in compensation to be made under that paragraph, subsistence will not be considered. In commenting on the situation thus presented, the Acting Assistant Commissioner stated that paragraph 19 must be construed in its entirety; that so construing the cited paragraph, it would not appear than an

express prohibition against subsistence payments may be overcome simply by casting the payment in the form of a component of hourly wage rates, and that thus it would appear that any labor cost component, whatever the terminology employed, that is actually subsistence or in lieu of subsistence, is still a subsistence payment which is excluded from escalation by the language of paragraph 19.

In paragraph 39 of his memorandum, the Acting Assistant Commissioner summarizes the facts in support of his view, that the component increases involved herein are not subject to escalation, as follows:

"39. In the instant situation, we are confronted by a strike by the unions that was called because the contractor refused to pay subsistence as provided for by the State labor agreements. The unions were perfectly willing to work for the standard statewide prevailing hourly wage rates. However, they did demand an expense allowance or subsistence when working outside the zones immediately surrounding the 12 cities designated in the union agreements. The wage rates now agreed to by the contractor are $0.50 per hour higher than the standard statewide hourly wage scale, and there is no mention of subsistence as a separate item of labor cost, as is provided for by the statewide agreements. This is the only substantial difference between the agreements signed by Merritt-Chapman & Scott and the statewide agreements binding upon all other union contractors in the State of Arizona."

In paragraph 40 of the memorandum reference is made to a significant provision in the Arizona master labor agreements, referred to as the "favored nation" clause, to the effect that in no event shall contractors be required to pay higher rates of wages, or be subject to more unfavorable working rules than those established by the respective unions for any other employer engaged in similar work in Arizona. It is reported that as a condition to entering into the separate labor agreement with Merritt-Chapman & Scott, the unions stipulated that assurance would have to be obtained from the Arizona chapter of Associated General Contractors that the "favored nation" clause of their master labor agreement would not be invoked against the unions. Counsel for the Arizona chapter of Associated General Contractors expressed the opinion that execution of the proposed agreement would not require the contractors signatory to the construction industry agreements to pay higher wages or be subject to more unfavorable working rules than were proposed to be established with the Merritt-Chapman & Scott Corp. On the basis of these facts the Acting Assistant Commissioner expresses the view that inasmuch as the separate agreement with Merritt-Chapman & Scott established higher wage rates than those contained in the State master labor agreements, the separate agreement with the contractor could only have been regarded as being more favorable in that the provision for subsistence contained in the labor agreements was deleted. In arriving at the decision that the separate agreement with Merritt-Chapman & Scott was no more favorable, it would appear that counsel for the Associated General Contractors necessarily had to equate the $0.50 per hour wage increase with the deletion of the requirement for subsistence contained in the master labor agreements.

For the reasons set forth in his memorandum, the Acting Assistant Commissioner recommended that the matter be submitted to our office for a decision and in connection therewith he made the following statement:

"42. I am definitely of the opinion that the contractor cannot transfer a payment from the category of those on which escalation is prohibited to a category on which escalation is required under the contract merely by increasing the hourly wage rate *over the standard statewide wage scale, with the concurrent elimination of subsistence payments required to be made by all other union contractors.* In view of the facts and circumstances set forth I am of the opinion that the Government is not legally liable for escalation under paragraph 19 of the contract for the $1.10 per hour increase for electricians or for the $0.50 per hour increase for the five basic crafts. * * *" [Emphasis supplied.]

The facts reported in this case clearly show that the procedure followed herein by the contractor was conceived and designed to relieve the contractor from the obligation to pay subsistence, required to be paid by all other union contractors in the State of Arizona, in order to create an obligation on the part of the Government to absorb 85 percent of an equivalent amount under the guise of an increase in wage rates. This is confirmed by testimony presented in proceedings in the Arizona Employment Security Commission to determine whether workers on the project were entitled to unemployment compensation for the period of the work stoppage between the execution of the master labor agreement and the negotiation of the separate agreement with Merritt-Chapman & Scott. The decisive issue was whether the stoppage was a lockout by the contractor or a strike by

workers, and the ruling that it was a strike supported the contractor's contention that it was not bound by the new statewide agreement. The testimony indicates that Merritt-Chapman & Scott's representatives made it clear to both the unions and the State contractors that its position with respect to the subsistence question was dictated by its interpretation of the wage escalation provisions of its contract with the Government.

On the basis of the provisions of paragraph 19 of the specifications, we concur in the view of the Acting Assistant Commissioner and Chief Engineer that the Government is not liable as a matter of law for escalation on the full amounts of the increases in the nominal wage rates, if in fact the increased rates include elements of subsistence or travel pay or other items excluded from consideration by the third subparagraph of that article.

We believe, however, that the amount of such excluded components included in the increased rate is a question primarily of fact, to be determined in the first instance by the contracting officer, and subject to appeal and final resolution under the provisions of the disputes clause of the contract. In view of the full consideration already given to the question, as indicated by the report of the Acting Assistant Commissioner, it would appear necessary only to state his determinations as findings of fact and furnish a copy thereof to the contractor.

We would like to express our appreciation for the very comprehensive memorandum prepared by the Acting Assistant Commissioner and Chief Engineer.

As requested, the enclosures to the letters of February 16 and March 3, 1960, are returned herewith.

Sincerely yours,

JOSEPH CAMPBELL,
Comptroller General of the United States.

RAINBOW BRIDGE NATIONAL MONUMENT

Chairman HAYDEN. The budget includes $3.5 million for the initiation of construction of protective facilities for the Rainbow Bridge National Monument.

Please comment on the provisions in the authorizing act concerning the protection of this area.

Commissioner DOMINY. There are two features in the authorizing act that refer specifically to this type of problem. When I say, type of problem, I mean the question of a Federal water resources project interfering in any way with the complete preservation in its original state of a national park or national monument area. The Colorado River Storage Project Act in one section states that there shall be no dam or reservoir constructed within the boundaries of any national park or monument. That has been interpreted to mean that we could not construct and operate a reservoir in such fashion that water would be pushed back into the boundaries of a national park or monument.

The other recognition in the act of this problem says something like this: That the Secretary of the Interior shall take such steps as he deems necessary to protect the Rainbow Bridge National Monument.

Considering the two together, it was our view that the Congress was directing us by this act to take whatever steps were necessary to keep water from pushing back into the monument and in cooperation with the National Park Service we have concluded that the most economical and feasible means of accomplishing that would be a barrier dam below the Rainbow Bridge National Monument on Bridge Creek to prevent the reservoir waters from moving back up Bridge Creek into the monument.

TOTAL COST OF FACILITIES

Chairman HAYDEN. I have heard that it is estimated that the total cost of these facilities would be anywhere between $15 million and $25 million. What would it cost?

Commissioner DOMINY. Well, unfortunately, Mr. Chairman, this is a feature that is almost impossible to give you an estimate that we would feel completely valid because of the nature of the terrain and the inaccessibility of the site. I know that the chairman recognizes the fact that southern Utah and northern Arizona have just about the ruggedest terrain in the United States.

Chairman HAYDEN. From my personal observation I can certify to that.

Commissioner DOMINY. Yes, I am sure you can, Mr. Chairman, and our present estimate for this work is actually $15 million but that is predicated on fairly uncertain estimates as to the cost of access.

Chairman HAYDEN. Would this $15 million to $25 million be reimbursable by the power users?

Commissioner DOMINY. Yes, sir; this would be charged as a regular feature cost of the Glen Canyon unit and the entire unit is being repaid from the Colorado River storage project power revenues.

EFFECTS OF WATER STORAGE

Chairman HAYDEN. I understand that the Geological Survey has studied the effects of water being stored in this area. Please comment on this.

Commissioner DOMINY. Yes, sir. In connection with our investigation, we, of course, wanted to ascertain all the facts pertaining to solving this problem and in cooperation with the Park Service and Geological Survey of the Department of the Interior, did send a top geologist into the area to work with the Bureau of Reclamation. The Geological Survey report indicates that structurally impoundment in the eroded inner channel to Bridge Creek—you understand, Mr. Chairman, that even if we do nothing the waters of the reservoir even with the reservoir at its maximum level does not inundate the abutments of the Rainbow Bridge. There would be about 45 feet of water in the eroded inner channel of Bridge Creek under the arch of the bridge.

To answer your specific question, the Geological Survey geologists' report indicates that it is their judgment that impoundment of water would not in any way affect the stability of Rainbow Bridge; but they do point out that, of course, the fluctuating water level would harm esthetic values of the monument, in that there would be watermarks and there would be silt deposition in some degree as well as destruction of the limited desert vegetation that grows there.

NATURAL PHENOMENON

Chairman HAYDEN. Does the visitor look at the creek bed or does he look at the arch?

Commissioner DOMINY. Well, I certainly recognize that the arch itself is the reason that the national monument is there. It is a very beautiful natural phenomenon and I was personally happy to see this

area, it is something we all ought to see. I spent 3 days down there on a horse looking it over. It is a very beautiful natural phenomenon and I am sure there will be as many people who will see it every few months after the reservoir is in place, than there have been to visit it over all the years since it was first designated as a national monument in 1910.

Chairman HAYDEN. It is possible that the storage above Glen Canyon would make the area more accessible, in that you could go up the lake in a powerboat.

Commissioner DOMINY. I certainly agree, and, as a matter of fact, from my personal observation from the 3 days that I spent down there, I doubt if the Park Service would want powerboats in the monument itself. But the powerboats could go back at least as far as the confluence of Bridge and Aztec Creeks, for example, a short walk up to the natural bridge. Of course, a trail would have to be provided because it is very rugged country and at the moment the only place to walk is the bottom of these canyons and they would be flooded out. If the barrier dam is built they could bring the boats up to that vicinity and then they would have to walk from there to the bridge in any event.

CHOICE OF TWO ALTERNATIVES

Chairman HAYDEN. Well, then, one of two things could be done. One would be to build the barrier dams at this very high cost and the other would be to allow the water to come up there, varying with the level of the reservoir.

Commissioner DOMINY. That is right. You would have to have some landing stages there to accommodate the kind of crowds that I think would be wanting to go up by boat. I think it would be a very attractive thing and thousands of people will be coming up there.

Chairman HAYDEN. With a full reservoir, do you think they could probably let them go up to 1 mile or a mile and a half?

Commissioner DOMINY. Well, boats could always go as far as the confluence of Bridge and Aztec Creeks even at minimum reservoir level. For this reason and because of the narrow confines of Bridge Creek Canyon, I doubt that it would be practicable to encourage boat traffic above this point.

Chairman HAYDEN. I see.

Commissioner DOMINY. And a trail from there, and whether it should be at Aztec Creek or further up, would be something for the Park Service people to work out.

WAHWEAP RECREATION AREA

Chairman HAYDEN. It has been brought to my attention that numerous people are using the "Wahweap area" for recreational purposes. Are you familiar with this problem?

Commissioner DOMINY. The Wahweap area is one of the principal and most accessible desert canyons that come down into the Colorado River from the west side immediately above the Glen Canyon Dam site and I am sure it will be one of the most attractive recreational areas because it is the most accessible.

Chairman HAYDEN. I see.

Commissioner DOMINY. It will reach up into Utah on the west side from the lower end of the reservoir and will be one of the principal arms of the reservoir.

Chairman HAYDEN. How far is the Wahweap area from the dam?

Commissioner DOMINY. The entrance to Wahweap Canyon is just about 2 or 3 miles upstream from the dam.

Chairman HAYDEN. That is my recollection.

Commissioner DOMINY. Yes, sir. As a matter of fact, that is the way we got down with our people, with four-wheel drive army-type vehicles, weazels, and things like that. We came down Wahweap Canyon with our surveyors to do some work on the tunnel and that sort of thing.

NAVAJO UNIT, NEW MEXICO

Chairman HAYDEN. The budget programs include $11,776,000 for the Navajo unit in New Mexico. The justifications will be included in the record.

(The justification follows:)

PF-46 (7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Colorado River Basin - The damsite is located on the San Juan River in San Juan and Rio Arriba Counties, New Mexico, approximately 39 miles east of Farmington, New Mexico.

AUTHORIZATION: Act of April 11, 1956 | B/C RATIO 1.2 | Date August 1958

LAND CERTIFICATION: None Required | DEFINITE PLAN REPORT: None Required

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 42,327,000	Appropriations to June 30, 1959	$ 10,593,150
Net Property and Other Transfers	879,000	Appropriations for F. Y. 1960	9,696,375
Cash Advances--Non-Federal		Appropriations to Date	20,289,525
Adjustment		Initial Underfinancing F. Y. 19	
		Appropriations Required for F. Y. 1961	11,776,000
Total to be Allocated	$ 43,206,000	Balance to Complete after F.Y. 19	$ 10,261,475

ALLOCATIONS 2/		REPAYMENT		AMOUNTS PER ACRE		
Irrigation	$ 42,100,172	Amount Repaid by Irrigators	$	Irrig. Invest. per Acre	$	Payment Capacity per Acre $
Power		Amount Repaid by Power		Repayment of Investment per acre:		Annual Charges:
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$	O. & M. $
Flood & Nav.	207,000	Upper Colo.Riv.Basin Fund	42,100,172	By Power Revenues		Construction
Recreation	834,000	1/	1,105,828	By M.& I Water Users		
CRDF Invest.	64,828	Non - Reimbursable				
Total	$ 43,206,000	Total	$ 43,206,000			Total $

STATUS OF REPAYMENT CONTRACT:

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Navajo Dam and Reservoir	1,709,000AF	35	3-63				
Permanent Operating Facilities		37	3-63				
Temporary Camp		100					

Acreage Full Supply _____ Supplemental Supply _____ Total Acres _____ Power kw _____

Region	Date	Project and State
4	1-18-60	Colorado River Storage Project, Navajo Unit, Colorado--New Mexico

BR-422

[1] Includes flood control, Colorado River development fund, investigations, and cost of recreation facility work for which funds are to be provided from other than upper Colorado River Basin fund.

[2] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$42,101,000	$42,100,172
Flood control	207,000	207,000
Recreation	834,000	834,000
CRDF	64,000	64,828
Total to be allocated	43,206,000	43,206,000

No change in basic allocation although Colorado River development fund has been adjusted for actual data instead of rounded data with irrigation adjusted accordingly.

JUSTIFICATION

Description.—The Navajo unit will serve as one of the storage units of the Colorado River storage project and provide irrigation water by storage of the flows of the San Juan River for the 110,630-acre Navajo project. Facilities of the unit to be built by the Bureau of Reclamation include only the Navajo Dam and the 1,709,000 acre-foot Navajo Reservoir.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed, fiscal year 1961

Navajo Dam and Reservoir, $11,960,000.—The program provides for continued construction work on the dam and the installation of Government-furnished material such as fixed-wheel gate and hoist, tandem outlet gate, ring-follower gates, hollow-jet valves, outlet pipe, stoplogs, elliptical bulkhead and miscellaneous embedded and nonembedded metalwork. The right-of-way program is to be completed this fiscal year. Program also includes the relocation of Denver and Rio Grande Western Railroad, Archuleta County road in the vicinity of Arboles, Colo.; a stockyard; and a telegraph line. Reservoir clearing will be started.

Service facilities, depreciation, and salvage, —$152,000.—The program provides $46,000 for the purchase of miscellaneous equipment, automotive parts, and supplies, which is more than offset by $198,000 of prior cost distributed to permanent property.

Consolidated expenditures and credits, —$32,000.—The program consists of adjustments totaling $10,000 for deferred power charges and $22,000 for a nonappropriation equipment transfer from other Bureau projects.

Change in total obligations

	Obligations
1960 congressional justification	$42,327,000
1961 congressional justification	42,327,000
No change	----------

PROGRESS OF CONSTRUCTION

Chairman HAYDEN. What comments do you want to make on this?

Commissioner DOMINY. Well, the Navajo unit is coming along extremely well. The contractor has been a little ahead of schedule ever since the starting of the project, and we expect to wind up in fiscal 1963.

It is one of the most beautiful earthfill construction jobs to visit and to see underway of any dam we have built for a long while.

Chairman HAYDEN. And is it accessible?

Commissioner DOMINY. Quite accessible, and there are several good vista points for the public, and the public should be, I am sure, much interested.

NAVAJO IRRIGATION AND SAN JUAN-CHAMA PROJECTS

Chairman HAYDEN. What are the status of the plans for the Navajo Indian irrigation project and the San Juan-Chama project?

Commissioner DOMINY. I would like to ask Mr. Palmer to comment on that. There have been some very recent hearings in the House of Representatives which Mr. Palmer handled for me, Senator.

Mr. PALMER. Mr. Chairman, there were hearings in the House on S. 72 and H.R. 2352 and H.R. 2494 last Friday.

The San Juan-Chama project, initial phase, the one proposed for consideration now, involves the transmountain diversion of about 110,000 acre-feet of water annually. It would result in providing a supplemental irrigation supply to some 100,000 acres of land in New

Mexico and a full new supply to 16,000 acres. Additionally the project would supply municipal and industrial water for the city of Albuquerque.

The Navajo Indian irrigation project proposes the diversion of some 500,000 acre-feet of water and the irrigation of some 110,000 acres of land on the Navajo Indian irrigation project. This would result in a net depletion to the San Juan of a little over 250,000 acre-feet per year.

Both projects were favorably recommended by the department and the comments of the Bureau of the Budget were generally favorable. And, of course, we do not know as yet what the action of the committee will take on these bills. S. 72 has passed the Senate.

Chairman HAYDEN. How long would it take and what would be, roughly, the cost of this diversion of water into the Rio Grande?

CONSTRUCTION SCHEDULE

Mr. PALMER. As I recall the construction schedule in terms of timing, it is about 15 years for the Indian project and about 6 years after construction starts before the last or the tributary projects would be completed for the San Juan-Chama project. As to cost, as I recall, the initial phase of the San Juan-Chama is around $86 million and the Navajo project would cost about $138 million.

Chairman HAYDEN. Tunneling is involved in there?

Mr. PALMER. Yes, sir. One long tunnel to take water from the San Juan River Basin into Willow Creek, which is a tributary of the Chama.

Chairman HAYDEN. With regard to the Indian irrigation project, has the Bureau of Reclamation been consulted about that?

Mr. PALMER. The Bureau of Indian Affairs and the Bureau of Reclamation have worked closely in the entire planning process on both of these units, and the report transmitted to the Congress was a fully coordinated report. The technical work of the Bureau of Indian Affairs on land classification and economies has been reviewed by the Bureau of Reclamation.

Chairman HAYDEN. I assume that the nature of the country—that it is one continuous irrigation area and there must be pockets?

Mr. PALMER. On Navajo there are several pockets and at least one fairly large area in the vicinity of Shiprock.

Chairman HAYDEN. What is the character of the soil?

SOIL CHARACTERISTICS

Mr. PALMER. The soils in this particular area are about as variable as one can find. There is some very good soil, and there is some soil that has some chemical problems, alkali. The only land that would be irrigated, of course, would be carefully screened as to its irrigability.

Chairman HAYDEN. We had a few mistakes made in that respect, and that is why I asked the question.

Mr. PALMER. That is a problem the Department is well aware of and we are approaching it very carefully.

Chairman HAYDEN. Yes.

It would give the Navajo Indians a substantial area where they could actually do some farming and not have to depend upon sheep and cattle and goats.

Mr. PALMER. The Bureau of Indian Affairs estimates that about 25 percent of the entire Navajo population would benefit. They look upon this as a transitional area where they would get the Indians to move from a nomadic life to where they could be more readily assimilated into the economy of the area.

Chairman HAYDEN. Well, that, of course, is the ultimate objective of the Bureau of Indian Affairs, that is, to fit the Indian into the American way of life.

Commissioner DOMINY. Exactly right, Mr. Chairman.

TRANSMISSION DIVISION

Chairman HAYDEN. The budget program includes $518,000 for the Transmission Division.

It is my understanding that the Bureau of the Budget will submit a supplemental estimate of $4,800,000, of which $3 million will be transferred from the Seekskadee project, for the construction of transmission facilities in fiscal 1961.

The justifications for the budget program will be included in the record at this point, and the justifications for the supplemental estimate will be printed in the record when the official communication from the President is received. (See p. 700.)

(The justifications referred to follow:)

PP-65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Colorado River Basin located in the States of Arizona, Colorado, New Mexico, Utah and Wyoming

AUTHORIZATION Act of April 11, 1956 | B/C RATIO 1/ Date

LAND CERTIFICATION None required | DEFINITE PLAN REPORT None required

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 157,395,000	Appropriations to June 30, 1959	$ 397,004
Net Property and Other Transfers	150,000	Appropriations for F. Y. 19 60	702,000
Cash Advances--Non-Federal	0	Appropriations to Date	1,099,004
Adjustment	2/ 9,089,000	Initial Underfinancing F. Y. 19	
		Appropriations Required for F. Y. 1961	518,000
Total to be Allocated	$ 166,634,000	Balance to Complete after F.Y. 19 61	$ 155,777,996

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE	
Irrigation	$	Amount Repaid by Irrigators	$	Irrig. Invest. per Acre $	Payment Capacity per Acre $
Power	2/166,534,000	Amount Repaid by Power	166,534,000	Repayment of Investment per acre:	Annual Charges:
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators $	O. & M. $
Flood & Nav.				By Power Revenues	Construction
CRDF 3/	100,000	Non-Reimbursable CRDF 3/	100,000	By M.& I. Water Users	
Total	$ 166,634,000	Total	$ 166,634,000		Total $

STATUS OF REPAYMENT CONTRACT: To be repaid from power revenues. To date no power contracts have been negotiated.

PRINCIPAL FEATURES

	Size or Cap.	Completion			Size or Cap.	Completion	
		F. Y. 1-1-60	Date			F. Y. 1-1-60	Date
Future Trans. Lines and Interconnection Facilities	To be determined	0	1973				
Permanent Operating Facilities	To be determined	0	1973				

Acreage Full Supply ____ Supplemental Supply ____ Total Acres ____ Power kw ____

Region	Date	Project and State
4	1-18-60	Colorado River Storage Project Transmission Division - Arizona, Colorado, New Mexico, Utah and Wyoming

BR-436

[1] The cost of the transmission division is distributed among the Glen Canyon, Flaming Gorge, and Curecanti storage units for economic analysis. The benefit-cost ratio would be the same as for the storage units combined.

[2] Includes $9,089,000 reimbursable interest during construction.

[3] Nonreimbursable amount financed with Colorado River development funds.

JUSTIFICATION

Description.—The transmission division will include transmission lines, substations, switchyards, and other facilities to provide for the interconnection of storage project powerplants with each other, with participating project power facilities, and with other Federal powerplants in order that the greatest practicable amount of firm power and energy can be produced and delivered to load centers for sale. This transmission system will also be interconnected with transmission facilities of public and private utilities in the area for delivery of power to customers.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed, fiscal year 1961

Future transmission line and interconnection facilities, $495,000.—The program provides for completion of studies and discussions with all interested parties on the proposed transmission system. When final decision has been reached, preconstruction work, including survey design and right-of-way procurement, will be initiated on transmission line or lines selected for initial construction. Board studies and alinement surveys will be continued on the complete transmission system.

Permanent operating facilities, $36,000.—Provides for construction of warehouses, shops, garages, and laboratory for use during preconstruction and construction activities.

Service facilities, depreciation, and salvage, —$9,000.—Represents distribution of prior costs of service equipment and facilities to permanent property.

Consolidated expenditures and credits, —$4,000.—Represents purchase of $1,000 of stores items offset by adjustment of $5,000 for vehicles procured by nonappropriation transfer.

Change in total obligations

	Obligations
1960 congressional justifications	$157,395,000
1961 congressional justifications	157,395,000
No change	----------

SUPPLEMENTAL ESTIMATE

Chairman HAYDEN. Please comment on the facilities which will be included in the supplemental estimate.

Commissioner DOMINY. Mr. Chairman, I have been authorized to discuss in detail with the committee this proposed estimate, which will come up very shortly, and it is exactly as you have described, $4,800,000 for the Transmission Division, of which $3 million would be financed by reduction in the Seekskadee unit of the Colorado storage project because we have been delayed getting that one under construction in fiscal 1960, and, therefore, we have less earning capacity requirements in fiscal 1961.

UPPER COLORADO TRANSMISSION SYSTEM

I would like to have Assistant Commissioner Bennett discuss with you any details of this Colorado transmission system, power marketing area, and elements of that sort.

Chairman HAYDEN. What facilities are included in the request?

Mr. BENNETT. With the $4,800,000 requested to initiate construction, we would contemplate building a 115-kilovolt line from Flaming Gorge to Vernal unit, to Rangely, Colo., to Oak Creek, Colo., and we would also contemplate initiating the construction of a 230-kilovolt line from Glen Canyon to the Farmington, N. Mex., area, and then northerly to Curecanti.

Chairman HAYDEN. Is there a demand for power in the Farmington area?

Mr. BENNETT. Yes, sir; there is. And, in the southern portion of Colorado.

Chairman HAYDEN. And I suppose that is the reason why you have an elbow, so to speak, in the line?

Mr. BENNETT. Yes, sir.

Incidentally, Mr. Chairman, the Farmington area is the point at which ultimately we would take off and go down to Albuquerque, N. Mex. It is also the general site where the Arizona Public Service Co. intends to construct a rather large steam plant.

Chairman HAYDEN. I understand there are coal deposits there that are very accessible.

Mr. PALMER. Yes, sir; both coal and gas in that area.

TRANSMISSION GRID CONSTRUCTION

Commissioner DOMINY. Now, Mr. Chairman, I want to make the record abundantly clear that this request to start federally financed transmission lines as part of the Colorado River storage project transmission system does not indicate in any way that a final decision has been made that all of the primary transmission grid is to be Federal construction. These two segments of the ultimate grid required to market this power are absolutely noncontroversial as to whether they would be built by Federal financing or by a private power company with a wheeling arrangement.

Chairman HAYDEN. Could private power make any money building these facilities?

Commissioner DOMINY. No, sir; and they have indicated no desire whatsoever, so these are strictly noncontroversial and I feel personally that we need to get underway in fiscal 1961 with construction because this is going to jam up on us and we are just not going to have enough people to get them all built at once in any event. We do have the marketing area designated and we do have a general outline of a system that we can analyze in detail so as to evaluate the merits of any proposal from private power companies to build remaining segments of the transmission grid.

And I can assure the Congress that we have no intention of passing up any opportunities for private construction if it is advantageous to the project and meets the standards laid down by Congress in the Colorado River Storage Project Act.

Chairman HAYDEN. Well, it has always been the policy of this committee that where wheeling arrangements could be made with the utilities serving the area at a rate that was comparable we would, of course, do that sort of thing. That was done in Oklahoma, Texas, Arkansas, Georgia, Montana, Colorado, and many other places.

It is my understanding that the preference customers have requested these facilities and that the private utilities serving the area have indicated that they do not oppose them.

Mr. DOMINY. That is correct.

DEPARTMENTAL PRESS RELEASE

On May 18 the Secretary announced the marketing area and criteria for power generated at facilities of the upper Colorado River storage project. I will include in the record the press release of the Department on this matter.

(The press release follows:)

COLORADO RIVER STORAGE PROJECT POWER MARKETING AREA AND CRITERIA ANNOUNCED

The marketing area within which the hydroelectric power to be generated at multipurpose dams of the Colorado River Storage project will be sold and utilized and the criteria under which the power will be sold were approved and announced today by Secretary of the Interior Fred A. Seaton.

Secretary Seaton also approved use of the transmission system shown on the attached map as the basis for the establishment of rate schedules for project power and as a yardstick to evaluate proposals for wheeling the power over existing or proposed extensions of private utility lines.

Construction of transmission lines to the south of Glen Canyon would be dependent upon receipt of specific assurances that power sold there could be withdrawn under the criteria to meet future power needs in the upper or northern division.

The marketing area as established will be divided into two divisions.

Northern division to consist of the States of Colorado, New Mexico, Utah, and Wyoming.

Southern division to consist of State of Arizona, that part of the State of Nevada in Clark, Lincoln, and Nye Counties, which comprise the southern portion of the State, and that part of the State of California east of the 115° of longitude or generally the area contiguous to the Colorado River.

The basic principles approved as broad guidelines for the marketing of power within the market area are—

(1) Preference customer requirements will be filled first and any power in excess of those needs will be sold to nonpreference customers by short-term contracts. Firm power in this latter category will be first offered to nonpreference customers in the northern division.

(2) Initially preference customer allotments in the northern division, to the extent project power is available, be sufficient to serve their 1965 net requirements, as determined by the Secretary of the Interior.

(3) Project production through 1965 not required by preference customers in the northern division to be allotted to serve preference customer loads in the southern division.

(4) At appropriate intervals, but not to exceed 2 years and beginning with July 1, 1963, the Secretary reappraise the requirements for firm power and energy of preference customers in the northern division and, to the extent power becomes available, make additional allotments to satisfy their requirements. Power for this purpose to be obtained from the following sources in order of priority:

(*a*) Sale of available unsold energy.

(*b*) Recapture after reasonable notice of firm power and energy under contract to nonpreference customers.

(*c*) Recapture after reasonable notice of firm power and energy under contract to preference customers in the southern division; provided, that recapture of firm power and energy initially sold to preference customers in the southern division to cease when remaining commitments of firm power and energy to the southern division have been reduced to amounts not exceeding approximately 7 percent of project capability during the winter months and 20 percent of project capability during the summer months. Project capability is defined for this purpose as the dependable capacity (reduced by transmission losses to delivery points) of storage project powerplants as determined from reservoir elevations. The winter maximum of approximately 7 percent be adjusted downward and the summer maximum of approximately 20 percent to be adjusted upward as the difference between the summer and winter peakloads of the northern division may indicate.

Prior to initiation of construction of transmission lines into the southern division, or in the alternative, of arrangements for delivery of power to customers in that division by other means, specific assurances shall be obtained from prospective customers in the southern division that the principle of recapture set out above will be applicable to allotments to, and contracts for, the sale of power to such customers.

(5) Project power is not to be sold to a preference customer for sale or exchange to a nonpreference customer for resale.

(6) Delivery of power will be made at the voltage of the project transmission system, i.e., 230 and/or 138 kilovolts, 115 kilovolts, except that deliveries of power may be made at lower transmission voltages at those delivery points at the powerplants to customers already having a lower voltage level established for their system at the point of delivery.

(7) Delivery of power to customers be made at the identified delivery points, or at such others as may be finally established by the Secretary. All costs for delivery of power beyond such delivery points to be borne by the customers.

Secretary Seaton stressed that the marketing of power in the southern area under the safeguard of withdrawal when needed to meet growing loads in the northern area will be of great economic advantage to the project. The diversity in peakloads as between the southern area and the northern area will enable the Government to market a greater amount of Glen Canyon firm power than would be possible if power were marketed in the northern area only.

He also pointed out that further consideration would be given to the transmission line requirements from Glen Canyon to the Sigurd, Utah, area. Proposals have been made by preference customer groups to provide service to this area by construction of the additional necessary facilities. Later consideration will determine the practicability of such proposals. In the event they prove impractical, the project system would be modified to include service to that area.

Determination of the firm power supply will be based on the average (1906–59) generation augmented by purchase of offpeak energy during years of less than average flow.

Secretary Seaton acted on recommendations of Commissioner of Reclamation Floyd E. Dominy. These were approved Tuesday, May 17, by Acting Secretary Elmer F. Bennett. Commissioner Dominy also pointed out that a number of technical aspects of operational advantage would accrue by reason of the necessary interconnection between the Federal power producing plants of the Colorado River storage project and the Federal hydroelectric projects in the Lower Colorado River Basin.

Commissioner Dominy added that the Secretary's approval cleared the way for the Bureau of Reclamation to complete studies necessary to determine power rates and also its analysis of transmission line construction proposals by private utilities in the area. He said that applications to purchase power would be invited from the preference customers at a later date followingde termination of power rates.

Authorizing legislation for the Colorado River storage project was passed by the Congress and signed into law by President Eisenhower in 1956. The storage project includes four major storage dams and reservoirs, of which three will have hydroelectric plants. Thev are: Glen Canyon Dam, on the Colorado River in northern Arizona, started in 1956, first power anticipated to be available in 1964, ultimate installed capacity, 900,000 kilowatts; Flaming Gorge, on the Green River in northern Utah, started in 1957, first power anticipated to be available in 1963, ultimate installed capacity, 108,000 kilowatts; Curecanti unit, consisting of a series of dams on the Gunnison River in Colorado, funds to initiate construction requested in 1961 fiscal year budget, total installed capacity estimated at about 160,000 kilowatts.

A map showing the proposed transmission system is attached.

COLORADO RIVER STORAGE PROJECT
PROPOSED TRANSMISSION SYSTEM

ADVANCE PLANNING

Chairman HAYDEN. The budget program includes $938,000 for advance planning of authorized projects.

The justifications will be included in the record.

(The justification follows:)

UPPER COLORADO RIVER BASIN FUND—ADVANCE PLANNING

Summarized financial data

Total obligations, fiscal year 1960	$961,013
Allotment, fiscal year 1961	938,000
Total obligations	938,000

Purpose of program.—Subsequent to authorization of a Bureau of Reclamation project, additional detailed studies are generally required to refine the findings of the feasibility report and evolve a definite plan of development prior to start construction. The major portion of this work consists of the collection of final design data, the preparation of final designs and specifications, and completion of the definite plan report. It also includes negotiations with local interests leading to execution of repayment contracts. This advance planning program will finance detailed preconstruction studies on the Crystal Dam facilities of Curecanti storage unit and the participating projects of the Colorado River storage project and participating projects to prepare those developments for start of construction. During fiscal year 1961 advance planning will be underway on the following projects:

CURECANTI UNIT, COLORADO

Location and description.—This unit is located on the Gunnison River in east-central Colorado near the city of Gunnison. The unit will include the Blue Mesa Dam, Reservoir, and powerplant, located about 30 miles below the city of Gunnison and the Morrow Point Dam, Reservoir, and powerplant, located about 12 miles below the Blue Mesa Dam. The Blue Mesa development would consist of an earth and rock fill structure 350 feet high which will create a reservoir of 915,000 acre-feet and a powerplant with 60,000 kilowatts of installed capacity. The Morrow Point Dam, a concrete structure 400 feet high, would impound 117,000 acre-feet of water and provide head for a powerplant of 40,000 kilowatts of installed generating capacity. Investigations are underway of the economic feasibility of including in the unit a third development—the Crystal Dam, Reservoir, and powerplant—located immediately downstream from the Morrow Point Dam.

Authorization.—Act of April 11, 1956 (70 Stat. 105). Authorizing act provided that construction of the Curecanti unit was not to be undertaken until the Secretary of the Interior had certified to the Congress and the President that the benefits exceed costs.

Cost of investigations

Total estimated cost preconstruction planning		[1] $639,380
Estimated cost to June 30, 1960		[1] 592,587
Fiscal year 1961 program		46,793
Planning allocation	$45,730	
Stores on hand, etc	1,063	
Balance to complete		
Total estimated project cost		[2] 72,450,000

[1] Includes cost of investigations of Blue Mesa, Morrow Point, and Crystal facilities.
[2] Includes cost of Blue Mesa and Morrow Point Dams, Reservoirs, and powerplants only.

Fiscal year 1961 program.—The Secretary's supplemental report and certification of economic justificaton of the Blue Mesa and Morrow Point developments required by the authorizing legislation was transmitted to the Congress on July 14, 1959. The funds for fiscal year 1961 will be used to complete the studies of the economic feasibility of the Crystal development and to prepare a report thereon.

Justification.—This unit is one of the four authorized storage units of the Colorado River storage project and participating projects. The primary purpose of the storage units is to provide the long-term, holdover storage capacity on the Colorado River and its major tributaries that is necessary to permit the States of the upper basin to meet the requirements of the Colorado River compact regarding flows at Lee Ferry and, by water exchange, make possible upstream developments for beneficial use of each of the States' apportioned share of the water of the Colorado River. The Curecanti unit would contribute to this

objective by providing the regulation needed to control the flow of the Gunnison River, one of the major tributaries of the Colorado River. The unit would also provide a substantial block of hydroelectric power to meet the needs of the rapidly expanding population and the growing industry in the power market area. Studies indicate the full amount of the electrical energy that would be produced by the Curecanti unit could be fully absorbed within the market area within a very short time after its availability. In addition, the reservoirs of the Curecanti unit would provide extensive recreational opportunities.

CENTRAL UTAH PROJECT, UTAH

Location and description.—The central Utah project, initial phase, will be constructed in the Bonneville Basin in east-central Utah and in the Uinta River Basin, a tributary of the Colorado in northeastern Utah. This multiple-purpose project will provide irrigation water to about 28,540 acres of new land, a supplemental supply for about 132,000 acres, and furnish about 49,000 acre-feet of municipal water. Principal features of the project are Strawberry aqueduct, Strawberry Reservoir enlargement, powerplants with combined installed capacity of 61,000 kilowatts, and other regulating reservoirs, aqueducts, canals, and distribution systems. The initial phase of this comprehensive development will also provide flood control, recreation and forest resource development. The Vernal unit is now under construction.

Authorization.—Act of April 11, 1956 (70 Stat. 105).

Cost of investigations

Total estimated cost preconstruction planning		$3,708,000
Estimated cost to June 30, 1960		2,225,528
Fiscal year 1961 program		410,000
Planning allocation	$400,600	
Stores on hand, etc	9,400	
Balance to complete		1,072,472
Total estimated project cost, exclusive of Vernal Unit		228,894,000

Fiscal year 1961 program.—The program for fiscal year 1961 will provide for the continuation of the detailed preconstruction studies leading to completion of the definite plan report by the end of fiscal year 1963.

Justification.—The plan for the central Utah project was developed to meet the pressing needs for water and electrical energy in the Bonneville and Uinta Basins. Largely as a result of the industrial expansion, the population of the Bonneville Basin portion of the project area increased 29 percent from 1940 to 1950 and has continued to grow at a rapid rate. The area's demand for food and for municipal, industrial, and miscellaneous water supplies has increased accordingly. Although the basin contains vast areas of rich alluvial soil, irrigation is generally required to mature crops and the flow of small local streams falls far short of irrigation requirements. Importation of a substantial amount of water into the basin is essential to the basin's agricultural and industrial expansion. Furthermore, without the importation contemplated under the project, future municipal and industrial expansion in Salt Lake City and areas to the south will require a reduction in the use of water for irrigation. The Uinta Basin also has experienced a water shortage and is in need of an additional regulated water supply. This area is important as a milk and livestock supplier for the rapidly growing Bonneville Basin and reduction of its capacity to produce these important agricultural products will have a direct detrimental effect on the general economic status of the State. Along with this rapid population and industrial expansion, there is developing a pressing need for additional electrical power.

EMERY COUNTY PROJECT, UTAH

Location and description.—The Emery County project is located in the upper Colorado River Basin on the eastern slope of the Wasatch Mountains in the vicinity of Huntington, Castledale, and Orangeville in central Utah. This project would involve construction of Joes Valley Dam and Reservoir, a diversion dam, canals, laterals and drains. It would provide a supplemental water supply for irrigation of 20,450 acres now inadequately irrigated and full supply for irrigation of 3,630 acres of new land.

Authorization.—Act of April 11, 1956 (70 Stat. 105).

Cost of investigations

Total estimated cost preconstruction planning		$342,300
Estimated cost to June 30, 1960		220,188
Fiscal year 1961 program		110,180
Planning allocation	$107,600	
Stores on hand, etc	2,580	
Balance to complete		11,932
Total estimated project cost		9,913,000

Fiscal year 1961 program.—The detailed preconstruction studies of the Emery County project will be well advanced by the end of fiscal year 1960 and the program for fiscal year 1961 will provide for completion of those studies and preparation of the definite plan report.

Justification.—Development of a dependable irrigation water supply to improve local economic conditions and provide for normal growth in future years is the greatest need of the Emery County project area. The present variable water supply fails to meet the late-season requirements of lands now under irrigation, and 3,630 acres of arable land under existing canals lie idle for lack of water. Crops often fail to mature fully and in drought years serious crop failures are experienced after much of the production cost is already incurred. Many of the farm units are small and more than half of the farmers, not being able to meet operating expenses and provide support for their families, are forced to supplement their farm incomes with part-time employment. The project is needed to increase and stabilize the production of feed crops and thus support the local livestock industry, to increase the average acreage of productive land per farm, and otherwise increase incomes in order that farmers may maintain more suitable living standards.

LA BARGE PROJECT, WYOMING

Location and description.—The La Barge project is located on the Green River in southwestern Wyoming in the vicinity of the town of La Barge. The project would involve a canal making direct diversions from the Green River and a system of laterals to provide a full supply of irrigation water for some 8,000 acres of new land.

Authorization.—Act of April 11, 1956 (70 Stat. 105).

Cost of investigations

Total estimated cost preconstruction planning		$257,000
Estimated cost to June 30, 1960		195,234
Fiscal year 1961 program		54,604
Planning allocation	$53,350	
Stores on hand, etc	1,254	
Balance to complete		7,162
Total estimated project cost		1,816,000

Fiscal year 1961 program.—The fiscal year 1961 program will provide for completion of the detailed engineering and economic studies and preparation of the definite plan report.

Justification.—Coal mining, oil production, and livestock raising are the major industries in Lincoln and Sublette Counties. Coal production has declined materially in recent years, however, because of advances made by competitive fuels. Sheep and cattle raising is being restricted to avoid overuse of the range. These developments have seriously weakened the economy of the area. The La Barge project not only would provide food and fiber to meet the needs of the expanding population of the Nation but also would supplement the basin's income and provide settlement opportunities. This would offset in part of the effect of the declining trend in industries which have heretofore supported the area, and would contribute substantially toward stabilizing the local economy.

LYMAN PROJECT, WYOMING

Location and description.—The Lyman project is located along the Green River in southwestern Wyoming near the town of Lyman. The project would involve a dam and reservoir, a water collection system, canals, laterals and

drains. It would provide a supplemental water supply for 39,700 acres of presently irrigated land.

Authorization.—Act of April 11, 1956 (70 Stat. 105).

Cost of investigations

Total estimated cost preconstruction planning		$684,000
Estimated cost to June 30, 1960		450,012
Fiscal year 1961 program		186,827
Planning allocation	$182,520	
Stores on hand, etc	4,307	
Balance to complete		47,161
Total estimated project cost		11,436,000

Fiscal year 1961 program.—The fiscal year 1961 program will make it possible to complete detailed land classification and engineering surveys, and to initiate designs and estimates as required for completion of a definite plan report in fiscal year 1962.

Justification.—The economy of the Lyman project area is based almost entirely on a livestock industry and the production of livestock feed. Supplemental livestock feed cannot be produced by dry farming as precipitation averages only about 10.5 inches a year, about half of which occurs during the nongrowing season. Furthermore, the late season natural streamflows are not adequate for the land now irrigated and severe shortages are experienced practically every year. As a result, the livestock industry is severely restricted and the local economy has suffered accordingly. Additional late-season water is needed to bolster the livestock industry and local economy.

SILT PROJECT, COLORADO

Location and description.—The Silt project is located on Rifle Creek in Garfield County in west-central Colorado. It will involve construction of a storage dam and reservoir, canals and laterals to provide a full water supply for 1,900 acres of new land and supplemental water for some 5,300 acres of presently irrigated land.

Authorization.—Act of April 11, 1956 (70 Stat. 105).

Cost of investigations

Total estimated cost preconstruction planning		$323,000
Estimated cost to June 30, 1960		215,022
Fiscal year 1961 program		97,694
Planning allocation	$95,450	
Stores on hand, etc	2,244	
Balance to complete		10,284
Total estimated project cost		3,548,000

Fiscal year 1961 program.—The fiscal year 1961 program will be used to complete the designs and estimates, water supply studies, and other engineering and economic analyses and to prepare the definite plan report.

Justification.—The economy of the project area is based primarily on agriculture. Except for the lands holding senior water rights, however, the lands suffer extreme water shortages after June each year. A supplemental water supply is urgently needed to provide late-season water for maturing of crops. This would materially strengthen the economy of the area.

QUALITY OF WATER STUDIES

Location and description.—The objective of these studies is to evaluate the effect of storage and consumptive use of water in the Upper Colorado River Basin on the quality of water of the Colorado River.

Authorization.—Act of April 11, 1956 (70 Stat. 105).

Cost of investigations

Total estimated cost preconstruction planning		$1,100,000
Estimated cost to June 30, 1960		102,565
Fiscal year 1961 program		54,000
Planning allocation	$52,750	
Stores on hand, etc	1,250	
Balance to complete		943,435
Total estimated project cost		Not applicable

Fiscal year 1961 program.—The fiscal year 1961 program will provide for continuation of the quality of water studies.

Justification.—These studies are being made in accordance with the requirements of section 15 of the act of April 11, 1956, which required the Secretary of the Interior "to continue studies and to make a report to the Congress and to the States of Colorado River Basin on the quality of water of the Colorado River."

Crystal Dam

Chairman Hayden. What projects are included in this program?

Mr. Palmer. The Crystal Dam, which is the third dam mentioned by the Commissioner in his testimony a little while ago, and the study is presently underway.

Central Utah Project

The central Utah project is in for $400,450 and that is continuing an investigation already well advanced. It should be completed in fiscal 1963.

other units

The other units are in Utah, Wyoming, and Colorado, three of which are to be completed in fiscal year 1961, and the Lyman project is scheduled in 1962.

The other remaining investigation underway is a continuing one, that being the quality-of-water study, and there is some $52,750 scheduled for that work. There are no particular problems and all the work is underway and, unless it were decided to accelerate the completion dates, they are all on schedule presently.

Participating Projects

Chairman Hayden. The budget program includes funds for the continuation of the following participating projects: Vernal unit, $2,189,000; Hammond, $1,300,000; Paonia, $903,000; Smith Fork, $1,500,000.

The justifications for these will be included in the record.

(The justifications follow:)

VERNAL UNIT, UTAH

PF-45 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Colorado Basin-Northeast Utah in Ashley Valley of the Uintah Basin, Uintah County, approximately centered around Vernal, Utah.

AUTHORIZATION: Initial Phase, Central Utah Project, Act of April 11, 1956 | B/C RATIO 1.2 | Date July 1959

LAND CERTIFICATION: By Secretary October 2, 1958 | DEFINITE PLAN REPORT: Approved by Commissioner August 2, 1957

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 6,343,600	Appropriations to June 30, 1959	$ 1,035,000
Net Property and Other Transfers	612,400	Appropriations for F. Y. 1960	1,950,000
Cash Advances--Non-Federal	*******	Appropriations to Date	2,985,000
Adjustment	1/ 22,000	Initial Underfinancing F. Y. 1960	*******
		Appropriations Required for F. Y. 1961	2,189,000
Total to be Allocated	$ 6,978,000	Balance to Complete after F.Y. 19 61	$ 1,169,600

ALLOCATIONS 1/		REPAYMENT 2/		AMOUNTS PER ACRE			
Irrigation	$ 6,050,000	Amount Repaid by Irrigators	$ 1,500,000	Irrig. Invest. per Acre	$ 412	Payment Capacity per Acre	$ 2.93
Power	*******	Amount Repaid by Power	*******	Repayment of Investment per acre:		Annual Charges:	
M. & I. Water	1/ 605,000	Amount Repaid by M. & I. Water	1/ 605,000	By Irrigators	$ 102	O. & M.	$ .86
Ins. Municipal Fund	82,000	Upper Colo.Riv.Basin Fund	4,550,000	By Power Revenues		Construction	2.04
Recreation	93,000	Nonreimb.Invest.CRDF	82,000	By M.& I.Water Users			
Fish & Wildlife	148,000	Non - Reimbursable	3/ 241,000	Upper Colo.Riv.	310	Total	$ 2.90
Total	$ 1/ 6,978,000	Total	$ 1/ 6,978,000				

STATUS OF REPAYMENT CONTRACT: Contract executed July 14, 1958, with Uintah Water Conservancy District.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Stanaker Dam & Reservoir	37,300 AF	46	3-61				
Fort Thornburgh Div. Dam & Stanaker Feeder Canal	400 cfs	16	3-61				
Stanaker Service Canal & Laterals		10	3-62				
Water Service Pipe System	17.3 Mi.	7	3-62				
Vernal Area Drainage System		8	6-65				

Acreage Full Supply — | Supplemental Supply 14,700 | Total Acres 14,700 | Power kw —

Region	Date	Project and State
4	1-18-60	Central Utah Project, Vernal Unit, Utah

BR-442

1 Includes $22,000 interest during construction based on 3¼ percent interest on reimbursable municipal and industrial water allocation.

2 Based on repayment contract which results in a 50-year repayment period for irrigation.

3 Includes $120,000 for cost of recreational and fish and wildlife facilities work for which funds are to be provided from other than Upper Colorado River Basin Fund.

4 Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$6,123,000	$6,050,000
Municipal and industrial water	657,000	605,000
Colorado River development fund	82,000	82,000
Recreation	93,000	93,000
Fish and wildlife	26,000	148,000
Total to be allocated	6,981,000	6,978,000

The total to be allocated has been reduced by $3,000 due to recomputing interest during construction on municipal and industrial water at the legal rate of 3¼ percent as compared to a previously estimated rate of 3⅝ percent. The increase in fish and wildlife of $122,000 is comprised of an increase of $1,000 in specific facilities to be built under section 8 of the act of April 11, 1956, and a joint cost allocation amounting to $121,000 due to enhancement of fish and wildlife values as permitted by section 6 of the act and the Fish and Wildlife Coordination Act of 1958. This caused corresponding reductions in the allocation to irrigation and municipal and industrial water.

Agricultural production, present and future

The crops presently grown are alfalfa hay, small grains, and corn primarily for silage. There is a small amount of alfalfa seed being produced. It is anticipated that with project water the same crops will be produced.

JUSTIFICATION

Description.—The project is located in northeast Utah. It is a multipurpose unit of the central Utah project which will furnish a supplemental water supply to provide irrigation to 14,700 acres of partially irrigated lands and 1,600 acre-feet of supplemental water for municipal use, fish and wildlife, and recreation benefits.

Appropriation title.—Upper Colorado River Basin Fund.

Work proposed, fiscal year 1961

Stanaker Dam and Reservoir, $766,408.—The program provides for the completion of this feature so that storage in the reservoir can be initiated in March 1961.

Fort Thornburgh diversion dam and Stanaker feeder canal, $655,436.—For completing these two features in fiscal year 1961 with the diversion of water into Stanaker Reservoir scheduled in March 1961.

Stanaker service canal and laterals, $666,000.—The program provides for the continuation of the construction of these features. The construction is scheduled to be about 70-percent complete by the end of fiscal year 1961.

Water savings pipe system, $122,400.—Acquisition of rights-of-way, issuance of specifications, and award of contract are scheduled.

Vernal area drainage system, $4,000.—Collection of design data will continue during the year.

Service facilities, depreciation, and salvage, —$25,000.—This item represents $10,000 for the purchase of vehicles, which is more than offset by $35,000 of prior costs of service facilities distributed to project features or salvaged.

Consolidated expenditures and credits, —$244.—Represents a minor amount for adjustments.

Change in total obligations

	Obligations
1960 congressional justification	$6,343,600
1961 congressional justification	6,343,600
No change	

Hammond Project, N.Mex.

PF-46
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Northwestern New Mexico, along the San Juan River and south of Blanco, Bloomfield and Farmington.

AUTHORIZATION Act of April 11, 1956 — B/C RATIO 2.1 — Date March 1958

LAND CERTIFICATION By Secretary November 25, 1959 — DEFINITE PLAN REPORT Approved by Commissioner November 12, 1958

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 2,996,388	Appropriations to June 30, 1959	$
Net Property and Other Transfers	283,612	Appropriations for F. Y. 19 60	292,500
Cash Advances--Non-Federal		Appropriations to Date	292,500
Adjustment		Initial Underfinancing F. Y. 1960	100,000
		Appropriations Required for F. Y. 1961	1,300,000
Total to be Allocated	$ 3,280,000	Balance to Complete after F.Y. 19 61	$ 1,303,888

ALLOCATIONS

Irrigation	$ 3,174,000
Power	
M. & I. Water	
Flood & Mi	
Fish & Wildlife	98,000
CRDF Invest.	8,000
Total	$ 3,280,000

REPAYMENT

Amount Repaid by Irrigators	$ 450,000	
Amount Repaid by Power		
Amount Repaid by M. & I. Water		
Amount Repaid by Colo. River Basin Fund	2,724,000	
Non-Reimbursable	1/ 106,000	
Total	$3,280,000	

AMOUNTS PER ACRE

Irrig. Invest. per Acre	$ 814	Payment Capacity per Acre	$ 6.85
Repayment of Investment per acre:		Annual Charges:	
By Irrigators	$ 115	O. & M.	$ 4.55
By Power Revenues		Construction	2.30
By M & I Water Users			
By UCRBF	699	Total	$ 6.85

STATUS OF REPAYMENT CONTRACT: Repayment contract signed by Hammond Conservancy District on October 20, 1959.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Hammond Diversion Dam (Crest Length)	120 ft.	9	10-61				
Hammond Pumping Plant	22 cfs	9	12-61				
Main Canal	29.0 mi.	9	1-62				
Laterals and Drains	15.0 mi.	8	4-62 2/				
Perm. Operating Facilities	-	8	11-61				

Acreage Full Supply 3,900 — Supplemental Supply 0 — Total Acres 3,900 — Power kw 0

Region 4 — Date 1-18-60 — Project and State Hammond Project - New Mexico

BR-450

[1] Includes $8,000 expended for investigations from nonreimbursable Colorado River development fund, and $98,000 allocated to "Fish and wildlife."

[2] Essentially completed 4-62 except for some remaining drainage construction.

Agricultural production present and future

The area without irrigation will not support agricultural crops. Sparse grazing is provided by the native vegetation.

Under project conditions crops will include small grains, hay and forage crops, vegetables and fruits.

JUSTIFICATION

Description.—This is a single-purpose project which will provide a full water supply for 3,900 acres of arid lands in northwestern New Mexico. The project works extend west from Blanco to Farmington along the south bank of the San Juan River. Fish and wildlife benefits will also be provided.

Appropriation title.—Upper Colorado River Basin Fund.

Work proposed, fiscal year 1961

Hammond diversion dam, $222,000.—The program provides for issuance of specifications, acquisition of rights-of-way, and award of contract for the construction of Hammond diversion dam.

Hammond pumping plant, $118,000.—Specifications will be completed for turbine, pumps, and butterfly valves and contracts awarded. The main structure contract will also be awarded.

Main canal, $890,000.—Construction work will be continued on the main canal.

Laterals and drains, $50,000.—The program provides for collection of design data, acquisition of rights-of-way, preparation of designs and specifications, and award of contract for construction of laterals and drains.

Undelivered orders, $20,000.—Represents net change in obligations for goods and services on order not yet received.

Change in total obligations

	Obligations
1960 congressional justification	(1)
1961 congressional justification	$2,996,388

[1] Not included in fiscal year 1960 congressional justification.

PAONIA PROJECT, COLO.

PF-45 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION

Upper Colorado River Basin, West-central Colorado in Delta and Gunnison Counties

AUTHORIZATION Act of April 11, 1956 — B/C RATIO 2.50 — Date Dec. 18, 1959

LAND CERTIFICATION By Secretary August 21, 1958 — DEFINITE PLAN REPORT Approved by Commissioner June 25, 1957

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 5,379,451	Appropriations to June 30, 1959	$ 1,026,000
Net Property and Other Transfers	2,267,321	Appropriations for F. Y. 1960	3,105,375
Cash Advances--Non-Federal	124,220	Appropriations to Date	4,131,375
Adjustment		Initial Underfinancing F. Y. 1960	--
		Appropriations Required for F. Y. 1961	903,000
Total to be Accounted	$ 7,770,992	Balance to Complete after F.Y. 1961	$ 365,076

ALLOCATION 2/		REPAYMENT 1/		AMOUNTS PER ACRE			
Irrigation	$ 7,510,440	Amount Repaid by Irrigators	$ 2,320,000	Irrig. Invest. per Acre	$ 691	Payment Capacity per Acre	$ 3.69
Advances		Amount Repaid by Power		Repayment of Investment per acre:		Annual Charges:	
Contributions	124,220	Advances and Contributions	124,220	By Irrigators	$ 152	O. & M.	$ 1.24
Flood & Rec.	77,000	Upper Colo. Riv. Basin Fund	5,190,440	By Power Revenues		Construction	2.21
Recreation	7,500			By M.& I. Water Users			
Invest. CRDF	56,832	Non-Reimbursable	3/136,332	By UCRBF	339		
Total	$ 7,770,992	Total	$ 7,770,992			Total	$ 3.47

STATUS OF REPAYMENT CONTRACT: Contract executed June 11, 1948, with the North Fork Conservancy District. Amendatory Contract No. 14-06-400-668 executed August 21, 1957.

PRINCIPAL FEATURES

	Size or Cap.	Completion as 1-1-60	Completion Date		Size or Cap.	Completion as 1-1-60	Completion Date
Paonia Dam and Reservoir	21,000 A.F.	50	12-61				
Fire Mountain Diversion Dam	205 cfs	100					
Fire Mountain Canal, 200 cfs	33.5 Mi.	84	3-61				
Project Drains		0	after 66				
Temporary Camp		97	12-61				

Acreage Full Supply 2,230 — Supplemental Supply 13,070 — Total Acres 15,300 — Power kw none

Region	Date	Project and State
4	1-18-60	Paonia Project, Colorado

See attached sheet.

BR-454

[1] Repayment period 68 years.
[2] Changes in allocations:

	Fiscal year 1960 justifications	Fiscal year 1961 justifications
Irrigation	$8,226,600	$7,510,440
Flood control	72,000	72,000
Recreation	7,500	7,500
CRDF	56,805	56,832
Advances	130,000	124,220
Total to be allocated	8,492,905	7,770,992

Total to be allocated decreased because of net reduction in total estimated obligations to be incurred in construction of project plus minor changes in CRDF and advances and contributions to reflect actual data.
[3] Includes Colorado River development fund investigations, flood control, and $7,500 recreation cost which is to be financed from other than Colorado River Basin fund.

Agricultural production, present and future

Agricultural development in the project area consists of growing fruits, and of crops, including small grains related to the livestock industry. Eighty percent of the irrigated land is utilized for the production of livestock feeds. It is not anticipated that construction of the project will result in any major change to the agricultural pattern that now exists.

JUSTIFICATION

Description.—This is a multipurpose project which will provide a supplemental water supply for irrigation of 13,070 acres and a full water supply for 2,230 acres of new land in west-central Colorado. Benefits to fish and wildlife, recreation, and flood control will also be realized.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed, fiscal year 1961

Paonia Dam and Reservoir, $785,464.—The program provides for the substantial completion of work on the Paonia Dam and Reservoir and highway reloca-

tion. Work on reservoir clearing will be completed. A contract will be awarded and work initiated on the installation of an elevator in the outlet works.

Fire Mountain canal, $134,536.—For the completion of all work on the Fire Mountain canal extension and earth lining of various critical points.

Temporary camp, $2,500.—Represents the cost of minor work and maintenance of the existing Government camp.

Service, facilities, depreciation, and salvage, —$19,500.—Represents the net change of service facilities. An estimated $500 will be required for acquisition, and $20,000 of prior costs will be distributed to project features.

Change in total obligations

	Obligations
1960 congressional justification	$6,172,378
1961 congressional justification	5,503,671
Decrease	668,707

The change is principally due to a reduction of $1,070,000 on the Paonia Dam and Reservoir because of bid lower than estimated and a net decrease of $92,508 due to miscellaneous adjustments, partially offset by an increase in the estimate of noncontract costs of $413,801 to reflect current data; and the inclusion of project drains totaling $80,000, formerly omitted from the estimate.

SMITH FORK PROJECT, COLO.

PF: 65
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION: Upper Colorado River Basin, West-central Colorado in Delta County

AUTHORIZATION: Act of April 11, 1956 | B/C RATIO 1.09 | Date Dec 18, 1959

LAND CERTIFICATION: December 4, 1959 | DEFINITE PLAN REPORT: Submitted May, 1959

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 4,200,078	Appropriations to June 30, 1959	$ .....
Net Property and Other Transfers	219,922	Appropriations for F. Y. 1960	350,500
Cash Advances--Non-Federal		Appropriations to Date	350,500
Adjustment		Initial Underfinancing F. Y. 1960	75,000
		Appropriations Required for F. Y. 1961	1,500,000
Total to be Allocated	$ 4,420,000	Balance to Complete after F.Y. 19 61	$ 2,276,578

ALLOCATIONS		REPAYMENT [1]		AMOUNTS PER ACRE	
Irrigation	$ 4,122,000	Amount Repaid by Irrigators	$ 1,025,000	Irrig. Invest. per Acre $ 500	Payment Capacity per Acre $ 3.82
Power		Amount Repaid by Power		Repayment of Investment per acre:	Annual Charges:
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators $ 4/ 124	O. & M. $ 1.70
CRDF	72,000	Upper Colo. Riv. Basin Fund	3,097,000	By Power Revenues	Construction 2.12
Fish & Wildlife	127,000			By M. & I. Water Users	
Recreation	29,000	Non-Reimbursable	3/298,000	By UCRBF 376	
Total	$ 4,420,000	Total	$ 4,420,000		Total $ 3.82

STATUS OF REPAYMENT CONTRACT: Expected to be executed and validated by April 1960.

PRINCIPAL FEATURES

	Size or Cap.	Completion $ 1-1-60	Completion Date		Size or Cap.	Completion $ 1-1-60	Completion Date
Crawford Dam and Reservoir	13,650 A.F.	5/6	12-62				
Smith Fork Feeder Canal and Diversion Dam	2.7 Mi.	6	9-62				
Aspen Canal	6.6 Mi.	6	9-62				
Project Drains		2	1966				
Permanent Operating Facilities		2	11-60				
Temporary Camp		0	12-62				

Acreage Full Supply 1,320 Supplemental Supply 6,920 Total Acres 8,240 Power kw none

Region	Date	Project and State
4	1-18-60	Smith Fork Project, Colorado

BR-464

[1] Repayment period, 50 years.
[2] Includes $150,000 paid from ad valorem tax revenues.
[3] Includes Colorado River development fund and fish and wildlife. Also included is cost of recreation facility work to be financed from funds other than Upper Colorado River Basin fund.
[4] Includes an average of $18 per acre paid from ad valorem tax revenues.
[5] Work accomplished to Jan. 1, 1960, consists of investigations and advance planning.

Agricultural production present and future

Agriculture in the project area consists primarily of the production of livestock, livestock products, and livestock feed. Ninety-seven percent of the irrigated lands are utilized for the production of livestock feeds. It is not anticipated that construction of the project will result in any major change in the agricultural pattern which now exists.

JUSTIFICATION

Description.—The purpose of the project is to provide water for the irrigation of 6,920 acres of land now inadequately irrigated, and 1,320 acres of new land. Fish and wildlife and recreational benefits will also be provided.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed, fiscal year 1961

Crawford Dam and Reservoir, $1,173,000.—For continued progress under the construction contract on this feature and related work.

Smith Fork feeder canal and diversion dam, $173,000.—The program provides for the acquisition of land, completion of designs and specifications and award of contract on the feeder canal and diversion dam.

Aspen Canal, $144,000.—Provides for the acquisition of land, completion of designs and specifications, and award of contract on the canal.

Permanent operating facilities, $8,500.—This amount will provide for a permanent warehouse and garage building which will be used during construction and then turned over to the water users for operation and maintenance facilities.

Temporary camp, $7,500.—Represents completion of purchase of eight trailers.

Service facilities, depreciation and salvage, —$6,000.—New acquisitions in the amount of $2,600 will be required offset by a distribution of $8,600 of prior year costs to project features.

Changes in total obligations

	Obligations
1960 congressional justification	(1)
1961 congressional justification	$4,200,078

[1] Not included in fiscal year 1960 congressional justification.

FLORIDA PROJECT, COLORADO

Chairman HAYDEN. I think we understand pretty well about these. If there are no questions or comments, we will proceed with the next project.

Commissioner DOMINY. Very well, sir.

Chairman HAYDEN. The budget program includes $750,000 for the initiation of construction of the Florida project in Colorado.

The justifications will be included in the record.

(The justifications follows:)

PF-45 (7-58) BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION
Near Durango, La Plata County, Southwest Colorado in San Juan Basin of Upper Colorado River Basin.

AUTHORIZATION Act of April 11, 1956 | B/C RATIO 1.48 | Date Nov. 1959

LAND CERTIFICATION Scheduled for September, 1960 | DEFINITE PLAN REPORT Submitted to Commissioner, December, 1959

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 10,547,000	Appropriations to June 30, 1959	$
Net Property and Other Transfers	375,000	Appropriations for F. Y. 19 60	
Cash Advances--Non-Federal		Appropriations to Date	
Adjustment		Initial Underfinancing F. Y. 19 60	
		Appropriations Required for F. Y. 19 61	750,000
Total to be Allocated	$ 10,922,000	Balance to Complete after F.Y. 19 61	$ 9,797,000

ALLOCATIONS		REPAYMENT[1]		AMOUNTS PER ACRE			
Irrigation	$ 9,031,000	Amount Repaid by Irrigators	$ 2,900,000[2]	Irrig. Invest. per Acre	$ 464	Payment Capacity per Acre	$ 2.85
Power		Amount Repaid by Power		Repayment of Investment per acre:		Annual Charges:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 4/98	O. & M.	$ 1.20
Flood & Nav.	176,000	Amount repaid by Colo. River Basin Fund	7,131,000	By Power Revenues		Construction	1.65
Fish & Wld.	1,041,000			By M.& I Water Users			
Conf Invest.	672,000			By UCRBF	366		
Recreation	72,000	Non - Reimbursable	3/1,891,000			Total	$ 2.85
Total	$ 10,922,000	Total	$ 10,922,000				

STATUS OF REPAYMENT CONTRACT: It is expected that negotiations with Florida Water Conservancy District will begin early in calendar year 1960. Contract scheduled for execution in June, 1960, prior to initiation of construction.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Lemon Dam and Reservoir	40,300 ac.ft.	0	6-64				
Florida Farmers Diversion Dam		0	10-63				
Canal Enlargements		0	1-63				
Laterals		0	11-63				

Acreage Full Supply 5,730 | Supplemental Supply 13,720 | Total Acres 19,450 | Power by Home

Region	Date	Project and State
4	1-18-60	Florida Project, Colorado

BR-445

[1] Repayment period 50 years.
[2] Includes $300,000 paid from ad valorem tax revenues.
[3] Includes Colorado River development fund, flood control, and fish and wildlife. Also included is cost of recreation facility work to be financed from funds other than Upper Colorado River Basin fund.
[4] Includes an average of $15 per acre paid from ad valorem tax revenues.

Agricultural production present and future

The principal crop at present is alfalfa although some clover, pasture, and small grains are also produced. Little change in this pattern is expected in the future.

JUSTIFICATION

Description.—This is a multipurpose project located in southwestern Colorado near Durango. Lemon Reservoir on Florida River will regulate the flow of the river for irrigation of 19,450 acres of land, including 5,730 acres not previously irrigated and 13,720 acres in need of supplemental water. Regulated releases will be made from the reservoir to the Florida River. A minor part of the released water will be diverted by numerous small ditches that now serve lands in the narrow 25-mile-long river valley below the reservoir. A major part of the released water will be diverted through the existing Florida Canal and the Florida farmers' ditch to lands on Florida Mesa. The diversion dam for the Florida farmers' ditch will be replaced and the upper 4.9 miles of the ditch above its intersection with the Florida Canal will be enlarged. Below the intersection, the Florida Canal will be enlarged for a distance of 1.8 miles and beyond this enlargement a new lateral system will be provided to serve about 2,210 acres of land. Except for this new lateral system, existing laterals will distribute all project water with minor rehabilitations and extensions being made to serve about 3,520 acres in scattered tracts on Florida Mesa. A fish screen will be installed near the head of the Florida farmers' ditch. No project land drains will be required. Project irrigators are willing to correct inefficient irrigation practices under prior water rights to conserve water for project development. All project lands are privately owned except 785 acres of full irrigation service land that is in Indian ownership or allotments.

Two recreational areas will be developed near the Lemon Reservoir. The reservoir will also provide flood control benefits, will improve conditions for fish and wildlife, and will increase recreational use of the nearby San Juan National Forest.

Appropriation title.—Upper Colorado River Basin Fund.

Work proposed, fiscal year 1961

Lemon Dam and Reservoir, $622,000.—The program provides for collection of design data, acquisition of rights-of-way, preparation of designs and specifications, and award of the contract for the dam.

Florida Farmers' diversion dam, $3,000.—Collection of design data and site exploration work will be started.

Canal enlargements, $70,000.—The program provides for the acquisition of land, collection of field data, and completion of design and specifications for the enlargement of the Florida farmers' ditch and the Florida Canal.

Service facilities, depreciation, and salvage, $25,000.—For the acquisition of automotive, work and laboratory equipment, and office furniture and equipment.

Undelivered orders, $30,000.—Represents the net change in obligations for goods and services on order but not yet received.

Change in total obligations

	Obligations
1960 congressional justification	(1)
1961 congressional justification	$10,547,000

[1] Not included in the fiscal year 1960 congressional justifications.

MULTIPURPOSE PROJECT

Chairman HAYDEN. Please describe this project for the committee.

Commissioner DOMINY. The Florida project is a multiple-purpose project located in southwestern Colorado near Durango. The Lemon Reservoir on the Florida River will regulate the flow of the river for irrigation of 19,450 acres of land, including 5,730 acres not previously irrigated and 13,720 acres in need of a supplemental water supply.

Chairman HAYDEN. Do you have a repayment contract?

Commissioner DOMINY. We have a conservancy district organized as required by the Colorado River Storage Project Act known as the Florida Water Conservancy District, and we are working with them toward a contract negotiation. We have every reason to believe that we will have the actual contract by July of this year.

Chairman HAYDEN. The sum total of the acreage then, as you stated, will be 19,450.

Commissioner DOMINY. Yes, sir.

Chairman HAYDEN. What crops will be grown on the project lands?

Commissioner DOMINY. This is an area that would be characterized primarily by general crop agriculture under irrigation. The principal crops at present on the lands that are now under irrigation—and we believe this is going to characterize the project—is clover and alfalfa and considerable irrigated pasture and feed grains that go with an irrigated livestock enterprise.

Chairman HAYDEN. It is an area based on a livestock economy?

Commissioner DOMINY. Yes. It would be pretty largely used as a livestock feed basis to help support a livestock economy—an economy that grows the cattle in the higher mountain regions in the summertime—that is correct.

SEEDSKADEE PROJECT, WYOMING

Chairman HAYDEN. The budget program includes $5 million for the Seedskadee project in Wyoming. However, as I stated earlier, we expect to get a communication from the Bureau of the Budget transferring $3 million of this sum to the Transmission Division.

The justifications will be included in the record.
(The justifications follow:)

PF-45
(7-58)
BUREAU OF RECLAMATION

PROJECT DATA SHEET

LOCATION Colorado River Basin on the Green River in southwestern Wyoming in Sweetwater and Lincoln counties near Green River, Wyoming

AUTHORIZATION Act of April 11, 1956 (70 Stat. 105) | B/C RATIO 1.41 | Date April 1959

LAND CERTIFICATION By Secretary November 13, 1959 | DEFINITE PLAN REPORT May 20, 1959

SUMMARIZED FINANCIAL DATA

Total Federal Obligations	$ 36,808,367	Appropriations to June 30, 19 59	$
Net Property and Other Transfers	1,710,933	Appropriations for F. Y. 19 60	1,154,400
Cash Advances--Non-Federal		Appropriations to Date	1,154,400
Adjustment		Initial Underfinancing F. Y. 19 60	
		Appropriations Required for F. Y. 19 61	5,000,000
Total to be Allocated	$ 38,519,300	Balance to Complete after F.Y. 1961	$ 30,653,967

ALLOCATIONS		REPAYMENT		AMOUNTS PER ACRE			
Irrigation	$ 36,097,000	Amount Repaid by Irrigators	$ 7,200,000	Irrig. Invest. per Acre	$ 614	Payment Capacity per Acre	$ 5.30
CRDF	411,000	Amount Repaid by Power		Repayment of Investment per acre:		Annual Charges:	
M. & I. Water		Amount Repaid by M. & I. Water		By Irrigators	$ 122	O. & M.	$ 2.85
Fish & Wildlife	1,826,000	Upper Colorado River Basin Fund	28,897,000	By Power Revenues		Construction	2.45
Recreation	185,300	CRDF (Nonreimbursable)	411,000	By M. & I. Water Users			
Total	$ 38,519,300	Non-Reimbursable [1]	1/ 2,011,300	U.C.R.B.F.	492	Total	$ 5.30
		Total	$ 38,519,300				

STATUS OF REPAYMENT CONTRACT: Substantial portions of lands are owned by the United States; accordingly, repayment contract will not be required prior to construction. Repayment contract negotiation and execution are scheduled prior to completion of development period for first irrigation block.

PRINCIPAL FEATURES

	Size or Cap.	Completion % 1-1-60	Completion Date		Size or Cap.	Completion % 1-1-60	Completion Date
Fontenelle Dam and Reservoir	285,000 AF	3	6-64	Drains	219.0 MI.	0	5-71
Upper West Side Pumping Plant	80 CFS	3	6-63	Community Pasture	4,255 AC.	0	6-73
Lower West Side Pumping Plant	120 CFS	3	6-64	Permanent Oper. Facilities		0	6-73
West Side Canal & Laterals	33,856 AC.	3	6-66	~~Permanent Camp~~		0	6-73
East Side Canal & Laterals	10,404 AC.	3	9-66	~~Temporary Camp~~		0	6-62
Big Sandy Canal & Laterals	14,515 AC.	3	5-68				

Acreage Full Supply 58,775 Supplemental Supply None Total Acres 58,775 Power kw None

Region	Date	Project and State
4	1/18/60	Seedskadee Project, Wyoming

lm-458

[1] Consists of fish and wildlife and recreation costs. Of this amount, $1,355,300 will be financed from other than Upper Colorado River Basin fund.

Agricultural production present and future

The Seedskadee project at the present time is an arid undeveloped rangeland area. With the coming of irrigation, the principal agricultural products will be hay, pasture, small grains, sheep, dairy cows, and beef cattle.

JUSTIFICATION

Description.—This project is located on the Green River in southwestern Wyoming. The primary purpose of the project is to provide a full water supply for 58,775 acres. Recreation and fish and wildlife protection are other purposes of the project.

Appropriation title.—Upper Colorado River Basin fund.

Work proposed, fiscal year 1961

Fontenelle Dam and Reservoir, $3,074,956.—This amount provides for award of contracts for construction of the dam, highway relocation, oil line relocation, reservoir clearing and for right-of-way purchases.

Upper west side pumping plant, $315,000.—The program provides for collection of design data, preparation of designs and specifications and the award of contract for the pumping plant.

Lower west side pumping plant, $36,000.—The program provides for initiation of collection of field data.

West side canal and laterals, $495,000.—Provides for the completion of field data and designs and specifications, and award of contract on the first reach of the canal.

East side canal and laterals, $5,000.—For studies of project features scheduled for construction in subsequent years.

Big Sandy canal and laterals, $11,000.—For studies of project features scheduled for construction in subsequent years.

Drains, $14,000.—For studies of project features scheduled for construction in subsequent years.

Permanent operating facilities, $136,575.—This amount will provide for the continuation of construction of the permanent project headquarters and service buildings, which are to be used by construction forces during the construction of the project.

Permanent camp, $274,200.—Provides for continued construction of housing facilities and camp access road. These facilities which will be used by construction forces and later for operation and maintenance personnel are as follows:

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
3-bedroom houses (20)	$380,000	----------	$31,000	$192,500	$156,500
Streets, utilities, landscaping	130,000	----------	46,000	58,200	25,800
Access road	45,000	----------	21,500	23,500	----------
Total	555,000	----------	98,500	274,200	182,300

Temporary camp, $256,540.—The program provides for the contract earnings on the contracts for the construction of the temporary construction camp. Details of the current and budget year fund requirements are as follows:

Item	Total estimate	June 30, 1959	Fiscal year 1960	Fiscal year 1961	Balance to complete
Transa houses (45) and trailers (10)	$469,000	----------	$57,000	$120,540	$291,460
Streets, utilities, miscellaneous	347,000	----------	183,000	136,000	28,000
Total	816,000	----------	240,000	256,540	319,460

Service facilities, depreciation, and salvage, $55,954.—For the completion of construction of a temporary warehouse and laboratory and the purchase of automotive and other work equipment all totaling $84,865 offset in part by the distribution of $28,911 of prior year costs of service and camp facilities to the permanent properties.

Other project costs, $25,000.—For continuation of the land-purchase program.

Consolidated expenditures and credits, $10,000.—Represents $35,000 for the purchase of stores items which will be partially offset by $25,000 of stores items that will be used in the project features during the year.

Undelivered orders, $290,775.—Represents the net change in obligations for goods and services on order but not yet received.

Change in total obligations:	*Obligations*
1960 congressional justification	(1)
1961 congressional justification	$36,808,367

[1] Not included in the fiscal year 1960 congressional justification.

PROJECT PROBLEMS

Chairman HAYDEN. Please comment on the problems you have encountered on this project.

Commissioner DOMINY. The most serious problem that we have encountered in terms of possible future delay is in connection with the mining of trona. After the project was included in the fiscal year 1960 construction program, mineral exploration on the part of several companies resulted in the awareness of the fact that the Seedskadee lands are underlain with a sizable block of trona at a level closer to the surface than other areas now being mined. As a result, the Stauffer Chemical Co. has expressed great interest in leasing public lands and in making arrangements with the Union Pacific Railroad—this area

is characterized by checkerboarded ownership with alternate sections being owned by the Union Pacific Railroad. This problem is giving us pretty grave concern because once the trona is mined, even though it is 1,000 to 1,500 feet under the surface, there will be a surface subsidence. And we know from mining experience in nearby areas where trona is currently being mined that subsidence will follow. We have not figured out a 100 percent sure way of dealing with this subsidence problem if we were irrigating the surface over that mining operation.

However, that is not the reason for the delay in fiscal 1960. We just did not get as much engineering and advance planning done as was originally contemplated and we are a little behind our original schedule in awarding the contract for the Fontenelle Dam, which is the first thing to be put into construction. However, I feel that we must, if necessary, delay the construction start on the Seedskadee unit until we can determine what is the proper way to treat with the compatibility, or incompatibility, of irrigation and trona mining in the same general area.

Chairmen HAYDEN. What is the material being taken out of the ground?

Commissioner DOMINY. Trona, and it is used in a number of manufacturing processes and is becoming significant in the Nation's industrial economy. It is not used in tremendous quantities and, as we understand it, there is enough trona under the Seedskadee project to last 100 years or more and they are discovering more all the time as they do their exploratory drilling.

Chairman HAYDEN. Is that a mineral product that is scarce elsewhere and just happens to be plentiful in that area?

Commissioner DOMINY. Do you know, Mr. Palmer, whether it is being mined anywhere else?

Mr. PALMER. The mine at Westvaco in Wyoming is one of the largest commercially producing mines in the country. California also produces trona commercially. It is a substance that is available in many other places, but it happens to be in large concentrations here and it is profitably mined at this point. As the Commissioner has indicated, it is used widely primarily in the ceramics and chemical industries and there is enough trona in that area to last the world for a good long while at any foreseeable rate of development.

Chairman HAYDEN. What is it used for?

Mr. PALMER. It is a primary source of soda ash. It is used in the ceramic and chemical fields and is important in the production of glass, soap detergents, cleaners, water softeners, and in the petroleum, aluminum, paper, and steel industries.

Chairman HAYDEN. How far down do they have to go to get it?

Commissioner DOMINY. It is about 1,000 to 1,500 feet under the surface.

Chairman HAYDEN. It seems remarkable that mining at that depth would affect the surface.

Commissioner DOMINY. We have discussed with the company the prospect of leaving walls—mining it by rooms and leaving some supporting walls—but we have been told that the margin of benefit over cost in this process of mining and getting it ready for industrial use is so narrow that they cannot agree to do this.

LAND CAVING AND SLIDING

Chairman HAYDEN. There is no support left?

Commissioner DOMINY. That is right. So they propose to mine this out completely and allow the land to subside.

Now, in that Westvaco area, they are mining at about a 1,500-foot level, and the subsidence on the surface is from 4 to 6 feet—and that is under desert dry land conditions. Now if we were irrigating and saturating the soil, there might even be heavier subsidence than that. We do not know. Furthermore, we have reason to doubt that the subsidence will come all at once and uniformly, and you can imagine what that would do to a man's irrigated farm, where he has leveled and has his farm ditches in, and we have our irrigation laterals in and then the land subsides 2 feet one place and 6 feet another, and 4 feet someplace else. It may take 3 or 4 years for it to gradually shift down to the new level. All these problems we are going to have to consider and determine a reasonable course of action before we actually start construction of this unit.

Now there are several prospects that we are studying. The one that I think probably would be the most apt to be feasible is just reduce the size of the Seedskadee project and leave out the lower portion where the trona mining is apparently definitely in prospect. And perhaps we can put capacity in the main canal so that when the mining is completed and subsidence has taken place, then we could develop the remaining area.

Chairman HAYDEN. How much would that reduce the size of the project?

Commissioner DOMINY. Well, approximately from one-fourth to one-third of the project is involved. And this is not a simple problem because alternate sections are publicly owned and alternate sections are privately owned by the Union Pacific Railroad. We had originally hoped that we could make an exchange of public lands for the Union Pacific lands so we would have a block of land for a veteran settlement. We want to assure the committee that we think there will be a solution to this, but we do not intend to start building the project works until we have worked out a proper program that takes into account both irrigation and trona mining in the same general area.

STATEMENT BY SENATOR MCGEE

Chairman HAYDEN. I will include in the record a statement by Senator McGee pertaining to the Seedskadee project.

(The statement referred to follows:)

STATEMENT OF SENATOR GALE W. MCGEE

The reduction by the House committee of the construction appropriation for the Seedskadee reclamation project of $3 million is a matter of intense interest to those of us who are concerned with the economic future of Wyoming. It raises a serious question as to when the benefits, measured in water, land, and jobs, which will accrue from this project will be available.

It is possible that the development of the trona deposits which have been discovered under part of the land which would be irrigated with project water will cause some alterations to be made in project plans. This possibility, however, certainly does not threaten or jeopardize the strong public interest at the project's early completion.

The Bureau of Reclamation should conclude the studies which the discovery of this trona makes necessary as early as possible during the fiscal year 1961 and

should meanwhile proceed to let contracts for those basic portions of the project which will require no alteration.

There is certainly no doubt that the Seedskadee project is valid and the economic growth of Wyoming makes it necessary that it be pushed to completion at the earliest possible date. According to the new census figures, Wyoming now has over 326,000 residents. This is a dramatic increase over the last decade, but it is only the beginning of the tremendous increases which are in store during future decades.

COMMENTS ON HOUSE BILL

Chairman HAYDEN. Now I assume you will have some comments on action that the House has taken on the bill and those comments you may place in the record.

Commissioner DOMINY. Very well, sir.

PREPARED STATEMENT

Chairman HAYDEN. Senator Carroll has submitted a statement which we will place in the record at this point.

(The statement referred to follows:)

STATEMENT BY SENATOR JOHN A. CARROLL

BUREAU OF RECLAMATION RESEARCH FUNDS

In the development of water resources in the West, all the "easy" reclamation projects have been built.

We are now faced with utilizing every scientific skill at our command to make future projects feasible.

Also, in recent years inflation has steadily raised the costs of our western water projects.

It becomes more important than ever (with the projects more complex and the costs inflated) that we devote greater and greater attention to meticulous project planning, design, and construction.

The tools for a more scientific approach to these aspects of water development are basic and applied research.

In the past, when reclamation projects carried a high benefit-cost ratio, we could afford not to place primary emphasis on research to determine techniques for gathering and conserving the water carried by a project. But not today.

Today it is imperative for two reasons that research on water conservation be expanded and intensified if the reclamation program is to continue.

First, we have now reached the point in some sectors of this country where water is being consumed to the point of exhaustion. The limit has been reached. There is no further supply for new population, new development. We can no longer afford to waste water. Especially in the West, every precious drop that can be saved must be saved.

Second, it is imperative that water collection and storage projects built with public funds be fiscally sound. Benefit-cost ratios are becoming tighter as the project sites become more difficult to develop. Although 92 percent of reclamation expenditures are repaid by the water users, it is still public money that is risked in the initial development.

This is why, Mr. Chairman, I hope the Senate Appropriations Committee will provide the Bureau of Reclamation the $250,000 for which it has asked for research.

This is a modest sum to help perform a gigantic task.

The area to be researched is vast.

1. *Reduction of water losses from evaporation on reservoirs and lakes.*—In the West alone we lose 25 million acre-feet of water per year from evaporation.

2. *Prevention of water losses through seepage in canals.*—In 1957, 57 Bureau of Reclamation projects were furnished 16,802,000 acre-feet of water, of which only 10,866,000 acre-feet actually was deposited on farmlands. This is a staggering 36-percent waste of water. Not all of this is seepage loss; but if through seepage control we could save just one-fourth of that lost water, the annual increased benefits to the United States would be $4.5 million ($3 per acre-foot times 1.5 million acre-feet).

In my speech on October 30, 1959, to the National Reclamation Association, I called attention to the effective research work done by the Colorado Water

Conservation Board on lining canals with an earth material called bentonite. The Bureau is also experimenting with this, but more research of this type on seepage control is necessary.

3. *Control of aquatic weeds and phreatophyte trees, which line ditches and canals, reducing the efficiency of the distribution systems and consuming the water.*—On January 29 of this year Senator Clinton Anderson (Democrat, of New Mexico) introduced in the Senate a joint resolution (S.J. Res. 156), which I have strongly endorsed, calling for expanded research on phreatophytes or water-wasting trees. Senator Anderson mentions the research done by the Bureau of Reclamation on phreatophyte control. Senator Anderson pointed out that these useless trees covered 15 million acres of bottomlands in the West and consume 25 million acre-feet of water annually. This is wasted water.

4. Control of silt and sediment in reservoirs and canals.

5. Research on—

Concrete.
Earth materials.
Types of rock for riprapping.
Hydraulics.
Dam structures.
Metal corrosion.
Water measurement.

These are some, but not all, of the subjects being researched by the Bureau of Reclamation scientists.

Each time a scientific "breakthrough" occurs in one of the research projects I have just mentioned, the water users in the West and the American taxpayers benefit.

Each "breakthrough" means more water for fewer dollars.

Thus, each dollar spent on research is a dollar prudently spent.

It is an investment that pays off in real dollar dividends.

I hope the committee has in mind that most of the investment in reclamation research is being borne by the water and power users who are directly benefited by the projects. However, the dividends accrue to all the water consumers of the West and the taxpayers all across our country.

The research work of the Bureau is largely applied against reimbursable reclamation projects and in that regard I was especially impressed by a recent statement by the Bureau of Reclamation in defining the principles which guide its research program. The Bureau said:

"A basic principle since establishment of reclamation in 1902 is that money expended in carrying out western project development must be substantially repaid by those for whose benefit it has been spent. Therefore, the Bureau has the particular responsibility to construct water and land resources facilities economically and within the ability of the beneficiaries of such works to repay the costs of construction. Research provides constant stimulus and direction to achieve economy in the work."

However, certain basic research has broad national application and is not assignable against particular projects. That research is covered by the $250,000 requested by the Bureau and which I support today.

I hope the committee will not let it be reduced.

WATER RESEARCH ACCOMPLISHMENTS

Mr. Chairman, I wonder if the members of this committee are familiar with the research accomplishments of the Bureau of Reclamation?

I take particular pride in enumerating these accomplishments because they largely flow from the laboratories and fieldwork of the department of the Chief Engineer of the Bureau of Reclamation, which is located in Colorado.

In the past 10 years the research program of the Bureau of Reclamation has saved the American people $75 million.

The cost of research over the past 10 years was $10 million; the gross benefits $85 million; leaving a net savings of $75 million.

I ask permission, Mr. Chairman, to have included at this point in my remarks, a summary list of recent research accomplishments of the Bureau of Reclamation which have resulted in net savings of $75 million to the American taxpayers.

(List of research accomplishments attached to original statement.)

SUPPORT FOR OTHER RESEARCH APPROPRIATIONS

Mr. Chairman, my own conviction about the need in this country for expanded basic and applied research extends beyond the field of soil and water.

I have, on several occasions, made public my views on additional basic research needs in rocketry, nuclear power, space exploration, oil shale, coal, and other conventional fuels.

However, my strongest convictions are on the research needs in the field of water.

I have steadily urged accelerated research on saline-water conversion.

I have joined with Senator Engle of California in sponsoring a program for scientific weather research in the Colorado River Basin.

Only 3 weeks ago I came before another subcommittee of the Appropriations Committee and asked for funds for research on soil and moisture conservation in the semiarid Great Plains.

In February I appeared before still another Appropriations subcommittee and urged adequate funding for research on increasing the high-altitude water yield from forests and natural snowfields.

Last year I asked the Appropriations Committee for $2 million for a weather modification basic research program by the National Science Foundation. This sum was finally appropriated and work is proceeding in the highly important and strategically sensitive field of weather control. In my own State of Colorado this particular type of research is of paramount significance. The eminent director of the High Altitude Observatory in Boulder, Colo., Dr. Walter Orr Roberts, has testified to a committee of the U.S. Senate that a drought of unprecedented proportions is predicted for the Great Plains in the 1970's. (Half of the State of Colorado is in the Great Plains region.)

Dr. Roberts, who is perhaps this country's leading meteorological scientist, constantly and wisely emphasizes the critical need for basic research in all aspects of weather modification and water conservation in anticipation of the massive drought of the 1970's.

I share Dr. Roberts' concern over cyclical droughts in the Great Plains region. This is why I have long favored a program that would provide coordination between facilities now available to the Great Plains area in order to develop the region and its resources in anticipation of the inevitable and recurring floods and droughts. I have especially felt that water-research programs might be better coordinated and focused on attacking the natural resource problems of the Great Plains.

LIGHT PRECIPITATION IN GREAT PLAINS

While we make steady progress in meeting some of the problems of the Great Plains, we by no means have come close to meeting them all.

For example, just a few days ago I obtained a copy of a Soil Conservation Service report on "Wind Erosion Conditions in the Great Plains on April 1, 1960."

I note that 1,508,000 acres of land have been damaged by wind action, an increase of 500,000 acres in 1 month.

Although this is some 300,000 acres less than the amount of land damaged at this time last year, the real frightening story is in the category "In a condition to blow." In this category there are 11.1 million acres compared with 8.7 million in 1959. This is the worst situation since the critical drought year of 1957.

In Colorado alone, 41,000 acres of Great Plains cropland had been damaged on April 1, and 331,000 acres of cropland are in a condition to blow; 114,000 acres of Colorado range and other land are ready to blow.

These conditions are brought about by light precipitation in the Great Plains, accentuating again the need for unrelenting research in moisture conservation.

NEED FOR RESEARCH FUNDS THIS YEAR

Mr. Chairman, basic and applied research on water development and conservation is something we cannot afford to postpone even 1 year.

We must fund prudently, but we must fund immediately.

The $250,000 requested by the Bureau of Reclamation, to supplement its project research expenditures, is a most modest sum for a task of such magnitude and significance. It should not be reduced.

Last year I was shocked to see the House cut down a similar request to $70,000, which figure prevailed through a conference with the Senate.

I was pleased to hear on Friday that the House Appropriations Committee recommended the full $250,000 for research in its report to the House.

This year the House has wisely provided adequate funds for research on water collection and storage.

I ask the Senate Appropriations Committee to consider with favor the $250,000 budget estimate for research by the Bureau of Reclamation.

Research Accomplishments

As a result of research, it is now possible to construct concrete dams or other concrete structures using better but less expensive concrete. Earth dams are being constructed which contain a smaller volume of materials than in the past, made of earth materials formerly rejected as unsuitable, and placed on foundations formerly considered unsafe, all with more confidence and real safety than was previously possible.

Canals and other flow ways are being constructed which are stable in the sense that the banks will remain in the intended location and the bottom slope will remain on the intended grade. Lining materials have been developed to prevent or reduce seepage. Weed elimination and control programs have been developed to improve the ability of waterways to convey the intended quantity of water.

Structures which convey and control water such as tunnels, gate valves, spillways, and canals energy dissipators have been improved, their size safely reduced, and yet provide even better hydraulic performance than before. Greater use is being made of water measurement devices to conserve water and equitably distribute it to the ultimate users. Structures to exclude sediment from canals and pump intakes have been developed and succesfully placed in service.

Paints and protective coatings are being used which reduce maintenance costs and lengthen the life of exposed metalwork, such as gates, pipes, tanks, and trashracks. An A–C network analyzer is being used to study and improve power transmission systems. Photoelastic studies to determine and check computed stresses have aided in improving and reducing the cost of complex steel structures. Instrumentation providing builtin measuring facilities in field structures has helped to gather data for use in improving structure designs, such as in the measurement of stresses in tunnel reinforcing to determine whether a reduction in steel can safely be made.

More specifically, at Glen Canyon Dam, a huge concrete-arch dam now under construction on the Colorado River in northern Arizona, use of pozzolan in concrete will reduce the amount of cement otherwise required for the mass concrete of the 5 million cubic yard dam, bringing about a savings of about $1,300,000. Through development of a technique known as heavy-media separation, which makes it possible to utilize part of otherwise unsuitable aggregates (sand and gravel) in the mass concrete, savings of approximately $6,600,000 will be realized in the construction of the dam. The 700-foot high dam is the key feature of the Bureau of Reclamation's Colorado River storage project and second highest dam in the Western Hemisphere.

The savings to be realized through use of pozzolan at Glen Canyon Dam is a highlight of many years of intensive research, which has also resulted in substantial savings in the cost of concrete construction on earlier Bureau undertakings. For example, the inclusion of fly-ash pozzolan in the mass concrete of Hungry Horse Dam, a 3 million cubic yard structure in Montana, completed in 1953, brought about an estimated savings of about $1,250,000. Pozzolans contain silica and alumina compounds, which have little or no cementing ability; yet, when these compounds are combined in a concrete mixture along with portland cement, they react chemically with the ingredients in the cement and develop cementing qualities.

The heavy-media separation technique is an adaptation of a mining process. It was developed to remove excess amounts of unsound, lightweight aggregates which produce "popouts" on the surface of concrete when it is frozen and thawed. The process introduces aggregates into a heavy liquid suspension, where the objectionable lightweight particles are floated off and wasted, while the heavy, more sound particles sink and are reclaimed for use in the concrete. The heavy-media separation process will also make possible a savings of $2 million in the construction of Flaming Gorge Dam, a major water and power storage dam being built on the Green River in northeastern Utah. To this large savings, may be added $500,000 by specifying the use of pozzolan in the concrete for Flaming Gorge Dam. The dam will be a concrete-arch structure having a height of 490 feet and a volume of 922,000 cubic yards.

Savings in large amounts have also been realized through research in air-entraining agents for concrete, which improve workability and reduce cement requirements. It is estimated that the use of air-entraining agents has resulted in an overall average savings of $1 per cubic yard of concrete in structures built on reclamation projects, or savings of about $1 million annually, considering reduced maintenance costs as well as savings resulting from improved workability and reduced cement content. The air is entrained in concrete by the addition of certain agents which are similar to soaps or detergents. These admixtures provide multitudinous, microscopic air voids in concrete. The air bubbles thus dispersed throughout the concrete are in addition to the amount of air normally entrapped. The effect is to "lubricate" the concrete, making it more workable at decreased water and cement content and more durable through better resistance to the disintegrating action of freezing and thawing. The agent imparts other desirable characteristics which reduce the cost of concrete work and extend the service life of the concrete many times.

In the hydraulics field, testing of the models of the two 41-foot diameter Glen Canyon Dam spillway tunnels revealed that the spillway approach areas, excavated in the rock canyon walls, could be reshaped to improve flow conditions and that the approach areas could be reduced in size. The reduction of the 440,000-cubic-yard excavation, which would have been otherwise required, made possible a savings of $1,130,000 and added improvement in the performance of the spillways. In addition, it is conservatively estimated that thousands of dollars were saved through the hydraulic research which led to improved performance of the lower areas of the spillway tunnels.

Hydraulic research will make possible an estimated savings of $2 million in the construction of the spillway tunnel for the proposed Yellowtail Dam on the Missouri River Basin project in Montana. The reduction in construction cost was shown when hydraulic laboratory studies indicated that it would be possible to reduce the nominal tunnel diameter from 44 to 41 feet.

One of the most important contributions to savings for water users is the Bureau's research developments in weed control. From these investigations, Bureau researchers, in cooperation with the Department of Agriculture, have developed aromatic solvents which have a pronounced toxic effect on water weeds growing in irrigation canals. In many western areas, the growth of these weeds is so extensive that the passage of water through the canals to the farmers' crops is severely impeded, causing a major operational problem on irrigation systems. Before the discovery of the use of aromatic solvents, canals and ditches had to be cleaned of weeds by laborious and costly mechanical methods or by hand. The use of aromatic solvents in the 17 Western States has resulted in a total estimated savings of $6,200,000 since its development some 10 years ago. At present, the estimated annual savings is about $1,160,000.

A major breakthrough in research was the development of low-cost linings for canals and laterals through the use of bituminous materials, including buried asphalt membrane lining, as substitute for more expensive linings. The buried asphalt membrane lining is constructed by spraying special asphalt over the smooth subgrade until a uniform, flexible, watertight membrane is obtained. The membrane is then covered with a protective layer of earth and/or gravel. An accurate dollar value cannot be placed on the savings realized through the installation of the more than 7 million square yards of buried asphalt membrane canal lining by the Bureau of Reclamation. However, it is estimated that the savings in such construction over concrete linings during the past decade exceed $7,500,000. In addition, the effective seepage control made possible by the low-cost lining is bringing back to productivity hundreds of acres of previously waterlogged lands. Reduction in seepage also reduces drainage ditch requirements, resulting in savings in construction and maintenance costs.

Other savings in low-cost canal linings are being obtained through the development of the thick compacted earth lining, which provides a serviceable and economical water barrier for canals. Use of this type of lining on the Delta-Mendota and Friant-Kern Canals on the Central Valley project in California, and on the Wellton-Mohawk Canal, made possible an estimated saving of $3,400,000. In reaches of the 113-mile-long Delta-Mendota Canal where concrete linings were required it was believed that reinforcing steel would be required in the lining. Tests on the expansive clay foundation in the laboratory showed that wetting did not affect the stability of the slopes and that steel would not be required; savings, $1,400,000.

There has also been marked progress in achieving economies in other areas of soil mechanics and foundation engineering. As a result of extensive tests on

earth and rock materials for the 537-foot-high, 33-million-cubic-yard Trinity Dam on the Central Valley project, the world's highest earthfill dam, a reduction of about 8 million cubic yards was obtained. This reduction represents a saving of about $7 million. It was brought about by the selection of certain earth materials having greater strength than materials that would have been otherwise utilized and which accordingly made it possible to reduce the size of the dam. Research on the Cachuma project in California and in the Denver laboratories led to the use of shales from the spillway excavation as a part of the embankment for the project's Cachuma Dam an earthfill structure. This resulted in an estimated saving of $600,000.

Research has resulted in the development of an improved high-head gate used to control discharges for pressure heads up to 350 feet of water. Previously, high-head gates of this type had been inefficient and performance at small gate openings was not good. A slide gate having narrow gate slots, downstream seals, and a sloping bottom was developed. Use on the Palisades project resulted in savings of $1 million and at Glendo Dam $500,000. Future applications on Twitchell, Navajo, and Glen Canyon Dams will account for $1,500,000 additional savings.

Research on concrete pipe design procedures has resulted in an initial saving of $36,000 but it is conservatively estimated that continued use of the derived principles will result in savings of $36,000 per year.

Colorado River Storage Transmission

Chairman HAYDEN. I will include in the record a letter from Senator McGee, in which he requests the committee to recommend funds for preconstruction work of a transmission line to connect the Colorado River storage system with the North Platte system of the Bureau.

(The letter referred to follows:)

U.S. SENATE,
COMMITTEE ON APPROPRIATIONS,
May 23, 1960.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
Washington, D.C.

DEAR SENATOR HAYDEN: You will remember that in a recent letter I expressed the strong sense of urgency which I feel about the appropriation of funds to do the necessary preconstruction work on a transmission line which would link up the Colorado River storage system with the North Platte system during the fiscal year 1961. At that time I emphasized that if this preconstruction work were accomplished, the Bureau would be in a position at the end of fiscal year 1961 to go ahead with construction if the private power companies had not by that time come forward with an acceptable proposal.

An acceptable proposal would, of course, be a firm plan to construct a line which would integrate the Colorado River storage system with the North Platte system as adequately as would a public line, which would enable the Bureau to meet repayment provisions as adequately as would a public line, and which would also enable the Bureau to serve preference users as effectively as would a public line.

The Bureau of Reclamation estimates that it would require $400,000 to complete this preconstruction work during 1961 on a line which would connect the Flaming Gorge project with the Bureau extension from Boysen, Wyo. to Pilot Butte, Wyo. The purpose of this letter is to supply this figure and to urge as strongly as possible that the money be made available in the bill which the Bureau of Reclamation and Interior Power Marketing Agencies Subcommittee will shortly mark up.

Sincerely yours,

GALE W. MCGEE, *U.S. Senator.*

Requests for Investigations

Chairman HAYDEN. I will include in the record a letter from Senator McGee, of Wyoming, in which he requests the committee to recommend funds for four investigations in Wyoming.

(The letter referred to follows:)

U.S. SENATE,
May 20, 1960.

Hon. CARL HAYDEN,
Chairman, Senate Appropriations Committee,
Washington, D.C.

DEAR SENATOR HAYDEN: You will remember that during the recent hearings of the Bureau of Reclamation and Interior Power Marketing Agencies Subcommittee I urged the Bureau of Reclamation to furnish a priority listing of the nine unauthorized reclamation projects in Wyoming which were listed in the memorandum entitled "Potential Projects in Wyoming" which you so kindly allowed me to insert in the record on that occasion.

The Bureau has provided the priority listing which I requested and I have discussed its preferences with reclamation leaders in Wyoming. The purpose of my original request was, of course, to find out how much of an addition to the "General investigations" appropriation for fiscal year 1961 would be required to complete feasibility studies on the four most desirable projects. On the basis of the study of the Bureau and of the judgment of those whom I have consulted, the four projects upon which feasibility studies should be undertaken are:

The Opal project	$156,000
Fontenelle project	78,000
Missouri River Basin project, Cheyenne Division, Newcastle unit	50,000
Upper Star Valley project	75,000

The importance of these projects to the future economy of my State is very great. If Wyoming is to absorb its share of the population increases which lie ahead and to support this increased population at a desirable standard of living, it is necessary to start now to develop the economy which will provide the land, the jobs, the water, and the broadened tax base which are essential.

If the foregoing reasons were not compelling enough, the fact that Wyoming's contributions to the reclamation fund have been greater than those of any other two States also deserves consideration.

It is my earnest hope that the subcommittee will give this request every possible consideration.

I want to compliment the chairman of the subcommittee and of the full committee on his leadership and vision in this field and to express my gratitude for his very fine appreciation of our problems.

Sincerely yours,

GALE W. MCGEE,
U.S. Senator.

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS

Chairman HAYDEN. A letter to Senator Bible from Mr. V. G. Pearson, business manager of Local No. 57 of the International Brotherhood of Electrical Workers will be included in the record.

(The letter referred to follows:)

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS,
LOCAL UNION NO. 57,
Salt Lake City, Utah, May 4, 1960.

Hon. ALAN BIBLE,
U.S. Senate,
Washington, D.C.

DEAR SIR: On April 12, 1960, I appeared before the Senate Appropriations Committee in regards to appropriations for the Colorado River storage project. In my testimony I made the statement that the wages paid employees working for public utilities and cooperatives, as a rule, were far below those paid by private companies. You asked me at the time, if I had any comparisons with me which I could give to you. I did not have them with me but said I would mail them to you upon my return to Utah. I am enclosing the most up to date comparisons that are available to me. I have been unable to get comparisons on fringe benefits, but as a rule I have found that the fringe benefits of public employees are far below those of employees of private companies.

I would like to point out that Provo City is the only municipal-owned or cooperative electric utility in which we have members working. The line crews of this city are organized 100 percent.

Yours very truly,

V. G. PEARSON, *Business Manager.*

Comparative wage rates of private electric utility companies and municipal-owned and cooperative electric utilities in the State of Utah, using the lineman classification

	Per month
1960:	
Utah Power & Light Co. (private)	$502
Bountiful City	490
Moon Lake REA	435
Logan City	320–385
Provo City	499
Murray City	459
1959:	
Utah Power & Light Co. (private)	478
Mt. Pleasant	302
Spring City	225
Ephriam	300
Manti	312
Beaver	400
Monroe	315
Fillmore	350
Kanosh	250
Garkane Power Association (REA)	313
1957:	
Utah Power & Light Co. (private)	442
Springville	350
Spanish Fork	358
Payson	310
Strawberry Water Users	325

STATEMENT BY SENATOR BENNETT

Chairman HAYDEN. A statement by Senator Bennett of Utah in opposition to funds for the protection of the Rainbow Bridge National Monument will be included in the record.

(The statement referred to follows:)

UPPER COLORADO RIVER STORAGE PROJECT

In the President's budget for the upper Colorado project, there is a recommendation that $3.5 million be spent for so-called protective features to protect the Rainbow Bridge National Monument. While the proposal was made in good faith to implement those provisions of the Upper Colorado Act which provide that adequate measures shall be taken to protect the monument and that no reservoir shall be within any national park or monument, it is a monumental waste of money and protects nothing.

The $3.5 million is just the beginning of what will be a $15 to $25 million program. I have carefully read the geologic examination of the bridge made for the Department of the Interior by Wallace R. Hansen. He concludes that "there appears to be no valid geologic reason to fear structural damage to Rainbow Bridge as a result of possible repeated incursions and withdrawals of reservoir waters to and from the innter gorge of Bridge Creek beneath the bridge."

According to the Bureau of Reclamation report, the water under the bridge would be only 46 feet deep, but the water surface would be 21 feet below the left abutment and 33 feet below the right abutment of the bridge. And this depth would only occur 13 percent of the time when the reservoir is at its highest level. In other words, as geologist Hansen further states: "It thus is clear that any possible impairment to the bridge from fluctuating standing water beneath it would be esthetic rather than geologic or structural."

The so-called protective program calls for a barrier dam a half mile below the monument. While this dam would stop water from backing under the bridge, it would also trap normal drainage from springs and from flash floods occurring

inside the monument. Thus, automatic pumps would have to be installed at the damsite to lift the water over the dam. Then to get the material to the dam, it would be necessary to airlift men and equipment to the top of a 1,200-foot mesa above the construction site and lower aggregate by cableways and helicopters. The cost would be unbelievably high.

In addition, the plan calls for a dam and diversion tunnel three-fifths of a mile above the bridge to divert around the monument the creek which flows intermittently beneath the arch. It would also divert flash floods with their sediment and debris.

To protect a natural bridge which will not be harmed, Congress is asked to appropriate $15 million to $25 million or more. This is a high price to pay for no protection. Moreover, the 183-foot high dam would gouge a canyon wilderness area. And as the Salt Lake Tribune stated in its editorial of March 8, 1960, "To get material (for the dam) would entail excavation atop a high mesa in a fantastically eroded area * * *. Thus, not only would physical aspects of a wilderness be altered, but noise and fumes from diesels located outside the monument would certainly be apparent inside—hardly in keeping with the wilderness concept."

As for any esthetic problem created by the fluctuating water level of the reservoir, it should be noted that existing floods and seepage are at least as troublesome and probably worse in their effect.

An additional effect of the barrier dam would be to make the monument even more inaccessible. Rainbow Bridge can only be reached now by mule pack over a 15-mile trail from the Navajo Mountain School near the Utah-Arizona border. In 1958, only 1,238 people were able to visit the bridge, and in 1959, only 1,370. More people should be permitted to see the magnificent bridge. The reservoir will enable thousands more people each year to see the bridge and canyons, a sight presently denied to all but a hardy few.

Since the bridge will not be harmed by the reservoir, but will in fact be made more accessible, and since the protective measures will do more damage than they will prevent, and this at a colossal cost, I urge the committee to delete the $3.5 million. I hope you will write an express provision into the appropriations bill to prohibit the Bureau of Reclamation from spending money for the so-called protective features. If the funds are merely eliminated, I understand the Commissioner of Reclamation could be subject to an injunction.

If the conservationist lobbyists are worried about alleged "invasions" of the national park and monument system, then perhaps this committee may wish to recommend that the Rainbow Natural Bridge National Monument be changed in status to a national recreation area.

Transmission lines, upper Colorado project

I would like to submit a copy of a letter which I sent to the House Appropriations Committee in support of up to $5 million for two upper Colorado transmission lines. They are the lines from the Flaming Gorge Dam to Oak Creek, Colo., and Glen Canyon to Farmington, N. Mex. Perhaps the $3.5 million for Rainbow could be allocated for this purpose.

Advance planning, upper Colorado project

Funds to complete field engineering and detailed plans are essential to keep the systematic upper Colorado project development on schedule. In order to do this, the budget request item for advance planning of $938,000 should be increased by $175,000; $150,000 of this amount should be allocated to the central Utah project in Utah and $25,000 to the Lyman project in Wyoming. The central Utah funds are required to better balance the present planning program and to make it possible to complete the Bureau report by 1963.

General investigation funds

While the President's budget calls for $133,000 to continued general investigation of the lower Bear River project, $30,000 more is needed. With the signing of the Bear River compact by the States of Wyoming, Idaho, and Utah, the Bureau of Reclamation is now in position to push ahead more rapidly and complete the Bear River report.

In addition, I wish to specifically endorse two other important investigation budget items. These are the $30,000 for the Dixie project and the $110,180 for the Emery County project. As a result of recent negotiations between the lower Colorado basin States, there is increasing hope for the Dixie project. Funds are needed to revise the earlier report, and I can't emphasize too strongly the great need for water in Utah's Washington County. The same holds true for

Emery County, and the funds in this year's budget will finish the report, thus making the project eligible to receive appropriations.

New Mexico Projects

Chairman Hayden. A letter addressed to Senator Ellender from Senator Anderson in support of funds for various reclamation projects in New Mexico will be included in the record.

(The letter referred to follows:)

May 2, 1960.

Hon. Allen J. Ellender,
Chairman, Public Works Subcommittee on Appropriations,
U.S. Senate, Washington, D.C.

Dear Senator Ellender: This letter is written to express my strong support of budget items for the going units of the upper Colorado River project and to urge the approval of additional funds for planning work and flood control projects in New Mexico.

The President has submitted a budget for funds to continue construction of the Navajo Dam in New Mexico in the amount of $11,776,000. Construction work on this project is running ahead of schedule, and this is good. Early completion means a saving to the Government.

The Senate has twice passed the Navajo irrigation-San Juan-Chama project authorization bill which will put the waters stored behind Navajo Dam to beneficial use for irrigation, municipal water and industrial use. This bill is now pending before the House of Representatives and chances are good for its passage this year. I therefore urge that the full amount requested for fiscal year 1961 be allowed by your committee.

In connection with the above mentioned Navajo-San Juan-Chama projects, I want to point out that section 2 of Public Law 485 authorizing the upper Colorado River project gave priority to expedite preconstruction planning of these two projects. In order to put Navajo Dam water to work at the earliest date, advance planning for these projects will require $600,000 for the Navajo Indian project and $150,000 for the San Juan-Chama project. The funds for Navajo are necessary for aerial surveys, contour maps, final locations of main canals and laterals, and geological and materials investigations. The funds for the planning of San Juan-Chama would be used for collection of basic hydrological data necessary for the development of an operational plan, foundation drilling on damsites, and topographic mapping. Even though no funds were requested in the budget, I believe that this planning work is urgent, and I hope your committee will include funds for this planning work.

I am, of course, urging that Glen Canyon Dam and power construction be speeded and I, therefore, support vigorously the $62,690,484 estimate to continue construction of these key units in the upper Colorado system.

The Hammond project in New Mexico is another important project, small though it is. It is estimated to cost $3 million and $1,300,000 is requested in the budget for fiscal year 1961. The Hammond Conservancy District was organized in April 1958, and it is my understanding that a suitable contract for repayment of the reimbursable construction costs as required by the authorizing legislation has been approved. There appears to be no reason for delaying the start of construction on this project, and I urge that the budget request be approved.

The budget carries requests for funds in the amount of $100,000 for the McMillan Delta for a definite plan for channel to convey water through the delta into the McMillan Reservoir. This work is important as a water salvage project and should go forward.

The Middle Rio Grande project authorized by the Congress in 1948 is a joint undertaking of the Corps of Engineers and the Bureau of Reclamation. This includes the construction of Abiquiu Reservoir now under construction and for which $4,600,000 is requested for use of the Corps of Engineers to continue construction. The Bureau of Reclamation budget for its portion of the work in the Albuquerque area is $1,729,000.

The budget also includes $1 million for the Corps of Engineers for its part of levee work and bank protection from Cochiti to Rio Puerco. The Corps of Engineers has already given your subcommittee testimony that this figure could advantageously be increased to $1,600,000.

I support the above requests of the President for both the Corps of Engineers and Bureau of Reclamation, and urge they be approved with an increase of $600,000 for the Corps of Engineers for levee work and bank protection.

In addition to the above request, I wish to support the following items approved by the Bureau of the Budget:

RECLAMATION

Elephant Butte (to defend suits under Private Law 767)	$26,120
Carlsbad irrigation project (Federal share of $15,000 project)	4,700
Middle Rio Grande (Federal share of $1,450,000)	450,000
Rio Grande (New Mexico and Texas, $1,456,000)	421,000

CORPS OF ENGINEERS

In addition to funds mentioned above for Abiquiu Reservoir and the Rio Grande floodway, I urge that the budget request for Two Rivers Reservoir in the amount of $400,000 and $157,000 for the Socorro flood control project planning be approved.

TRANSMISSION SYSTEM FOR HYDROPOWER OF COLORADO RIVER STORAGE PROJECT

From the time of authorization of the upper Colorado River project, I have been interested in the early maximum use of Colorado River project power. I was glad to join with the Colorado River Preference Users Committee in urging the Secretary to definie and supply at an early date information as to the marketing areas, and also rates as well as the reservoir filling and operating criteria for Glen Canyon Dam.

It is my belief that if power produced from the upper Colorado project is to be equitably and economically delivered to the preference customers, the Bureau of Reclamation must own, operate and control the transmission facilities. It is therefore highly important that steps be taken at once to start immediate construction of the initial portion of the backbone transmission lines that are to carry the power from Glen Canyon to load centers.

The preference users of this area, in particular from New Mexico, have recommended that $5 million be made available to start immediate construction and that an additional $5 million be appropriated for future planning and construction. I joint them in recommending that the committee approve this request.

I also join the preference users in urging the committee to direct the Department of the Interior to make available to the public without delay the volume of power available and the cost at the various load centers. I feel that this information must be forthcoming now in order to plan properly for the equitable and economical distribution of power from this project.

It is also vital that the Secretary of the Interior, as I have urged him to do, shall fix the marketing area for the upper Colorado power system without delay. This is a vital step that is important to all concerned.

Glen Canyon Dam and powerplant are, of course, the key structures of the upper Colorado development and in reality the cash register that will provide the revenue.

I regret that I cannot personally appear before your committee at this time, However, I would like to have this letter made a part of the record of the hearings in connection with requests for funds for the Bureau of Reclamation and the Corps of Engineers.

A copy of this letter is going to Senator Hayden for his information.

Sincerely yours,

CLINTON P. ANDERSON.

CALIFORNIA WATER COMMISSION

Chairman HAYDEN. A statement by Mr. James K. Carr, chairman of the California Water Commission in support of funds for various California reclamation projects will be included in the record.

(The statement referred to follows:)

STATEMENT OF JAMES K. CARR, CHAIRMAN, CALIFORNIA WATER COMMISSION, ON BEHALF OF THE OFFICIAL WATER AGENCIES OF THE STATE OF CALIFORNIA

Mr. Chairman and members of the committee, my name is James K. Carr. As chairman of the California Water Commission, I have been requested to appear before you in behalf of the official water agencies of the State of California, to summarize the State's recommendations for appropriations for reclamation projects and the loan programs in various parts of the State.

A brief word about the commission might be of assistance to you. The California Water Commission consists of nine members appointed by the Governor. Among its responsibilities are administration of State water rights applications, approval of loans and grants under the State's local assistance program for water agencies, advising the director of water resources on various matters coming within his jurisdiction, approving condemnation proceedings by the Department, and others. The director of water resources, under section 12602 of the California Water Code, is authorized to represent the State before committees of Congress and executive agencies of the Federal Government. This responsibility, however, has been delegated over the years to the commission by the director, who has specifically requested that we assume such representation of the State on appropriations for California projects.

The requests which will be summarized for you, were established only after a series of meetings with the California Conference for Irrigation and Reclamation, and other interested individuals and agencies.

This actually is a consolidation of three separate Federal programs: reclamation, the small projects loan program, and the distribution system loan program in connection with Federal reclamation projects. Attached to this statement, which will be submitted for the record, is a tabulation of the projects, the difference between the budget and our request, if any, and a brief explanation of why we believe the increase is justified.

These requests have been carefully screened by the commission so that they can be presented to you in a minimum of time, and still be realistic both from the point of view of your committee and of the people of the State.

RECLAMATION PROJECTS

With two exceptions, the California Water Commission agrees with the budget provisions for the Central Valley project, and both of those items are contingent on the execution of repayment contracts between the local water agencies and the Bureau of Reclamation. I refer to an item of $555,000 for the Cow Creek unit of the Trinity River division, which will be explained by local witnesses later. The other exception is an item of $300,000 for studies, contract negotiations and project design for the authorized Tehama-Colusa Canal unit of the Sacramento River division, also to be detailed later.

The commission also agrees with the budget amounts for the Klamath project, the Washoe project, and the budgeted amount for general investigations.

SMALL PROJECT AND DISTRIBUTION SYSTEM LOAN PROGRAM

Believing that smaller, local projects are equally important to the overall development of the State as are major conservation projects, the California Water Commission strongly supports the six projects budgeted under the Small Reclamation Projects Act.

It also urges the appropriation for two projects which have been approved by the Secretary of the Interior and were transmitted to Congress this year. They are the Virginia Ranch project of the Browns Valley Irrigation District, $4,804,000; and the Camp Far West project of the South Sutter Water District, $4,875,000.

Three California distribution system contracts have been budgeted, under the terms of Public Law 130, including those of the Solano Irrigation District, Sausalito Irrigation District, and Chowchilla Water District. The Commission agrees with the budgeted amount in each case.

Program for Bureau of Reclamation projects

Project	Budgeted amount	Recommended amount	Difference
Central Valley project:			
Trinity Dam	$12,350,000	$12,350,000	None
Whiskeytown Dam	9,765,000	9,765,000	None
Lewiston diversion	1,013,000	1,013,000	None
Lewiston fisheries facilities	320,000	320,000	None
Clear Creek tunnel	8,109,000	8,109,000	None
Spring Creek tunnel	7,150,000	7,150,000	None
Trinity powerplant	4,088,000	4,088,000	None
Clear Creek powerplant	4,800,000	4,800,000	None
Spring Creek powerplant	4,020,000	4,020,000	None
Transmission lines	1,279,000	1,279,000	None
Cow Creek unit	----------	555,000	$555,000
Total Trinity division	52,894,000	53,449,000	555,000
Red Bluff diversion	----------	----------	----------
Corning Canal	450,000	450,000	None
Tehama-Colusa Canal	10,000	300,000	290,000
Corning Canal distribution systems	1,143,000	1,143,000	None
American River division, El Dorado Irrigation District system	1,600,000	1,600,000	None
Madera distribution system	1,750,000	1,750,000	None
Friant-Kern systems	1,995,000	1,995,000	None
Total Central Valley project	61,306,000	62,151,000	845,000
Klamath project	868,000	868,000	None
Washoe project	3,137,000	3,137,000	None
General investigations	1,187,000	1,187,000	None

NOTE.—Budget items listed for CVP are rounded off. Total as shown is the total of all items for the CVP as detailed in the President's budget. Miscellaneous items not shown in the budget also are not shown in the column representing the recommended amount, but reflect in the total.

Loan program under Public Law 984

Project	Budgeted amount	Recommended amount	Difference
South San Joaquin Irrigation District	$4,895,000	$4,895,000	None
San Benito Flood Control and Water Conservation District	1,420,000	1,420,000	None
Santa Ynez Water Conservation District	2,487,000	2,487,000	None
Pleasant Valley County Water District	1,651,000	1,651,000	None
Georgetown Divide Public Utility District	2,261,175	2,261,175	None
Jackson Valley Irrigation District	927,000	927,000	None
Browns Valley Irrigation District (approved but not budgeted)	----------	4,804,000	$4,804,000
South Sutter Water District (approved but not budgeted)	----------	4,875,000	4,875,000
Total	13,641,175	23,320,175	9,679,000

Projects under Public Law 130

Project	Budgeted amount	Recommended amount	Difference
Solano Irrigation District	$5,754,079	$5,754,079	None
Saucelito Irrigation District	1,947,000	1,947,000	None
Chowchilla Water District	1,736,362	1,736,362	None
Total	9,437,441	9,437,441	----------

The State of California is in full agreement with the budget on reclamation with the exception of two small items on which we recommend appropriations contingent on repayment contracts, and two loans under Public Law 984, 84th Congress, the Small Projects Act.

We recommend that an appropriation of $555,000 be made to the Cow Creek unit of the Trinity River division, Central Valley project, contingent on execution of a repayment contract. This unit will serve a rapidly developing area of

small farms. Water is needed for development of the area, and the local district has authorized the Shasta County Water Agency to execute a contract with the Bureau of Reclamation as soon as the latter supplies certain further data. This is expected to be available shortly. An appropriation under conditions such as we recommend would enable the work to get underway immediately on contract execution, and make water available to an area which has worked diligently for an imported supply for more than 25 years. No funds have been budgeted for this unit.

An appropriation of $300,000 for further studies, further contract negotiations and design and construction as required, for the Tehama-Colusa Canal unit of the Sacramento River division, Central Valley project, is recommended. The sum of $10,000 is budgeted for contract negotiations. Several public districts in the service area have reached the stage in contract negotiations at which completed contracts are imminent, and others are nearing this point. Large amounts of water from the Trinity project soon will be available and all studies by the Bureau of Reclamation recognize that the west side of the Sacramento Valley is the proper place of use for a substantial portion of it. Early construction of the Tehama-Colusa Canal will meet the need for supplemental water in the area and will hasten the repayment of both the canals and the Trinity River division.

LOAN PROGRAM, SMALL PROJECTS ACT

Browns Valley irrigation district (Virginia Ranch project).—This project has met all the requirements of the Act, has been approved by the Secretary of the Interior, and transmitted to Congress. Because these requirements were met since formulation of the budget, no funds are included. The sum of $4,804,000 is recommended so that the project can get underway. An insufficient water supply prevents economic development of the area.

South Sutter Water District (Camp Far West project).—The above also is true of this project. The sum of $4,875,000 is recommended. The district has completed arrangements for financing the remaining $1,375,000 cost. It should be pointed out here that the proposed State loan to the district is for costs over and above the statutory limit which can be loaned by the Federal Government under the Small Projects Act.

CALIFORNIA PROJECTS

Chairman HAYDEN. A statement by Mr. Ralph M. Brody, special counsel to Gov. Edmund G. Brown, in support of funds for California reclamation projects will be included in the record.

(The statement referred to follows:)

STATEMENT OF RALPH M. BRODY, SPECIAL COUNSEL TO GOV. EDMUND G. BROWN OF CALIFORNIA

Mr. Chairman and members of the committee, my name is Ralph M. Brody. I am special counsel on water matters to Gov. Edmund G. Brown, of California.

On behalf of Governor Brown and the people of California, I respectfully urge approval of the budgeted amounts for reclamation projects in California for 1960–61, including the proposed loans under the Small Projects Act and under Public Law 130, the distribution system program.

There are four small additions to the budgeted amount, which we consider to be essential to the proper development of California's water resources in a combined Federal, State, and local program. Mr. James K. Carr, chairman of the California Water Commission, has submitted, or will submit a somewhat detailed statement on these items together with appropriate facts and figures.

The people of California greatly appreciate the past recognition shown by this committee and the Congress of the importance to California and the Nation of the Central Valley project and others in California by way of past appropriations. Such projects have contributed tremendously to the sustenance of our economy on its present high level and have enhanced our national economy.

I would like to emphasize the fact, with which I am sure you are familiar, that reclamation in California has been profitable for all concerned. The Central Valley project alone has returned to the Federal Treasury the gross sum of $162,730,000, with a net income of $88,134,000. Two older projects, Klamath and Orland, have been in operation for many years, although the former requires some small appropriations for additions and modifications. The newer projects—

Solano, Santa Maria River, Ventura River, and Cachuma—have only recently been placed in operation but already give promise of rapid repayment as well as increased economic benefits to the State and Nation.

All of this might raise the question that California's water supplies are, or should be by now, fully developed. The reverse, of course, is true.

Governor Brown often has emphasized the fact that our population, growing at the rate of 500,000 people each year, not only requires water development to meet future needs but also to lessen the burden on existing supplies presently being overdrawn. This development must occur not only for the future but now to sustain our existing economy.

We are aware of the fact that if we expect substantial assistance from the Federal Government in this problem, we must also help ourselves; and that properly to develop our water supplies will require action not only by the Federal Government but also by the State and local governments as well as private industry.

To this end local agencies have spent to date more than $4 billion, and have under construction or under financing, projects amounting to over $750 million. The State itself has already embarked upon construction of a $2 billion project and in November of this year the people will vote upon a bond issue of $1,750 million to insure its completion.

But California cannot do the job alone in spite of its efforts thus far. Local districts have shouldered their fair share of the burden, but without the assistance of the Federal Government as well, we will fall behind.

What California is asking, then, is that the Federal Government continue its investment in the future of the Nation's agricultural economy under the reclamation program. These are sound projects; the record of repayment of California reclamation projects is clear in that regard.

The appropriation we recommend here is a sound investment on the part of the Federal Government in the strength and virility of the Nation. While California and its local public districts have compiled an outstanding record in the development of their water resources, they cannot do the unprecedented job alone. Finally, I wish to state that California's past record of repayment of reclamation projects is excellent, and that its prospects along this line are even more promising.

I thank you for the opportunity to present these views on behalf of Governor Brown. We strongly urge favorable action on the appropriations recommended by Chairman Carr of the California Water Commission and concurred in by the people of California.

Colorado River Storage Transmission

Chairman Hayden. I will include in the record a letter addressed to me from Mr. E. M. Naughton, president of the Utah Power & Light Co. (with a clarification); a letter and statement by Mr. L. M. Alexander, assistant general manager of the Salt River project; and a letter from Mr. Walter Lucking, president of the Arizona Public Service Co. These letters and statements pertain to the transmission system for the marketing of the power from the Colorado River storage project.

(The letters referred to follow:)

Utah Power & Light Co.,
Salt Lake City, Utah, April 27, 1960.

Hon. Carl Hayden,
U.S. Senate, Senate Office Building,
Washington, D.C.

Dear Senator Hayden: On April 12, 1960, I appeared before your subcommittee of the Bureau of Reclamation and Interior Power Marketing Agencies of the Appropriations Committee in connection with the Bureau of Reclamation's request for Colorado River storage project transmission division funds. After hearing and reading testimony of other witnesses, I believe there are a number of points that need clarification. The following questions and answers will, I believe, clear up some of the misunderstandings that appeared to exist at the end of the hearings.

Question. Why are all the utility companies offering to build lines when they may not get an allotment of power?

Answer. The utility companies plan their future transmission lines many years ahead and will build the lines discussed in my testimony in the next 10 years. They estimate that their power demands will increase 16 million kilowatts over the next 20 years. These lines can transmit the upper Colorado River project power (of which there will be only 1.2 million kilowatts) to marketing areas. Thus we have made the wheeling offer.

Following are specific examples of the companies' plans for transmission lines that are being constructed now or will be built in the near future regardless of whether the companies are able to work out arrangements for wheeling or marketing project power.

(a) One hundred miles of 138,000-volt line between Utah Power & Light Co.'s carbon steam-electric plant to Vernal, Utah, near Flaming Gorge, is now under construction for service by November of this year. This line is being constructed for the purpose of supplying a large industrial load and will also connect our isolated Vernal system (which in the past has relied on diesel engines for its power supply) to Utah Power & Light Co.'s main system. In addition, the line will provide a supplemental power supply for Uintah Power & Light Co., enabling that company to shut down its diesel engines. The above line will have ample capacity to transmit power south from Flaming Gorge through Utah Power & Light Co.'s transmission system to market and also will integrate Flaming Gorge with Glen Canyon.

(*b*) Last week Utah Power & Light Co. completed the construction of 70 miles of 230,000-volt line from Nephi to Sigurd, Utah. This line (announced in the press 3 years ago) was built for the purpose of providing a power supply to the center of Telluride Power Co.'s system and also to supply additional power to California-Pacific Utilities Co., serving southwestern Utah.

(*c*) Telluride Power Co. and the California-Pacific Utilities Co. now have under construction (for service not later than June 1 this year) 110 miles of 138,000-volt line from Sigurd to Cedar City in order to supply the latter company with a major power supply. In the past California-Pacific has relied on small steam and diesel units for its electric power. This line will have adequate capacity to wheel Glen Canyon power to preference customers in southwestern Utah.

(*d*) Utah Power & Light Co.'s peakload occurs during the winter season and the Arizona Public Service Co.'s peak, as a result of its air conditioning and irrigation load, occurs in the summer. An interconnection between these two companies will make it possible to interchange capacity during peakload periods, thereby postponing the construction of generating stations. This matter had been under study by engineers of both companies for some time and last summer decision was made by the two companies to build an interconnecting tieline for this purpose. Justification of this line is independent of Glen Canyon power availability and it will be built regardless of whether or not 1 kilowatt-hour of project power is ever wheeled. The voltage of the line and conductor size is such, however, that there will be plenty of surplus transmission capacity which the companies have offered to make available for transmitting project power to preference customers. A sizable portion of this interconnection has been constructed as described in item (*b*) above.

(*e*) Arizona Public Service Co., in connection with its Four Corners steam-electric project in northwestern New Mexico, is going to build multiple transmission lines to carry the power to Phoenix, a distance of 292 miles.

These specific examples outlined above, I believe, illustrate the fact that the companies have specific plans for transmission lines which are going to be carried out regardless of what the Bureau does or does not do. Should the Bureau construct lines contemplated by it, such lines would duplicate and in many cases actually parallel the private companies' lines. Other lines, of course, are going to be built for similar reasons not related to the Colorado River storage project.

Question. Will acceptance of the companies' plan result in higher cost to the Federal Government of transmitting the energy?

Answer. No. Acceptance of the companies' plan will result in considerable savings to the Federal Government, not only in initial investment but in energy transmission costs. The utility companies will put their lines to multipurpose use, including the wheeling of project power, thus spreading the costs, operating at a higher load factor and resulting in a lower unit cost than possible with single-purpose lines of the Federal Government. Based upon the estimated average output of the project plants, the Bureau's cost if it should build the complete high-voltage transmission system would be 1.75 mills per kilowatt-hour. If the bureau accepts the offer of the private companies, the average cost to the Government for transmitting project power would be less than 1.5 mills per kilowatt-hour, a saving of approximately 20 percent, to say nothing of additional

benefits of Federal and local taxes that the companies would pay out of their offered wheeling charges.

With reference to the letter to the Honorable Carl Hayden from Mr. E. M. Naughton on April 27, 1960, further word of explanation may be necessary.

On page 3 of the letter, the 1.5 mill per kilowatt-hour transmission cost, if the Bureau accepts the company plan, includes the full payment to the companies for wheeling and in addition the annual cost (fixed charges and operation and maintenance costs) on the investment in Flaming Gorge-Oak Creek and the Glen Canyon-Poncha junction transmission lines the Bureau would build.

The 1.75 mill per kilowatt-hour transmission cost, if the Government does not accept the company's plan, includes only one cost—the annual charges on the Bureau's much larger investment in transmission lines if it elects to build a complete Bureau transmission system.

Question. Is it true that either the charges to be paid by the preference customers for wheeling power will have to be increased, or the repayment ability of the project impaired if the Government accepts the private companies' plan?

Answer. No. Charts introduced at the Senate hearing purporting to prove this point were in error inasmuch as several important factors had been ignored. For example:

(*a*) The charts did not take into consideration the saving in cost to the Federal Government resulting from acceptance of the companies' plan.

(*b*) Because of the lower investment, the interest-bearing power features will be paid off earlier thereby making available revenues to pay off the non-interest-bearing irrigation features more rapidly, resulting in considerable savings in interest costs.

(*c*) Further, the chart also ignored the fact that 50 years is the normal life of transmission facilities. Such service life is used by the Federal Power Commission and is much more realistic than 100 years. However, even if 100 years be used, the Government's acceptance of the private utilities' plan would not result in additional cost to the preference customers nor impair the repayment ability of the project.

Question. Can preference customers absorb all the upper Colorado River power?

Answer. By about 1979 the upper division preference users group may be able to absorb all the project power as shown by the third line of the following table.

The market load tabulation used by all the parties, including the USBR and preference customers, is as follows:

[All values in megawatts]

	1963	1964	1965	1966	1970	1976	1979
Installed project capacity	108	445	783	1,068	1,168	1,229	1,229
Less estimated power requirements of upper division preference users	216	251	287	325	559	995	1,229
Remaining capacity over upper division preference users requirements [1]	------	194	496	743	609	234	0

[1] These quantities of power might be: (*a*) marketed to Arizona preference users, or (*b*) used for replacement of Hoover project contract commitments which may be reduced during filling of Glen Canyon Reservoir.

Question. Can Glen Canyon power be used to help Hoover contractors during the Glen filling period?

Answer. Yes. The interconnection lines can be used to transmit interchange power to minimize or eliminate deficiencies at the lower Colorado River plants.

Question. Is Arizona going to get an allotment of power?

Answer. The USBR has promised no allotments of any kind. Arizona Power Authority has made no commitments.

Question. Can Arizona absorb all of the power at firm prices until the upper division preference users need it?

Answer. Refer to the above table. During 1964 the 194 megawatts can be absorbed by Arizona preference users. During 1966 the 743 megawatts can be absorbed by replacing Hoover deficiencies in contract sales to Arizona preference users, providing planned construction of new steamplant capacity can economically be deferred and present plant production curtailed or used only as spinning reserve. In 1970, 609 megawatts could possibly be absorbed due to load growth.

Question. Should the Glen Canyon-Four Corners-Poncha line be built by the Federal Government?

Answer. Yes. Construction of this line by the Federal Government is logical since no private utility company lines are available on this route and none are

presently planned. However, as indicated by joint studies, the size and capability of the Glen Canyon-Four Corners section should be reexamined to avoid building too large or too many lines. Existing lines, and lines to be built by the private companies, location of steamplants and other tielines, may reduce the need of this section of line. The USBR and the utilities should carefully study various alternatives.

Question. Should the Flaming Gorge-Oak Creek line be built by the Federal Government?

Answer. Yes, for the same reasons as outlined in the preceding answer.

I hope that this letter will be of assistance in clarifying any misunderstanding with respect to the transmission plans of the private utilities.

Cordially,

E. M. NAUGHTON.

SALT RIVER PROJECT,
Phoenix, Ariz., April 29, 1960.

Mr. WILLIAM WOODRUFF,
Committee on Appropriations,
U.S. Senate, Washington, D.C.

DEAR MR. WOODRUFF: Upon receipt of the utilities' wheeling offers, Mr. Marion Wilson, president, Colorado River Basin Consumers' Power, Inc., appointed a committee to examine the proposals. The results of their study indicated that our original estimates of the high costs of the utilities' wheeling proposals on preference customer power costs had been conservative. Therefore we have put the report in the form of a revised statement which we hope will become a part of the record of the hearings.

I would like to call your attention to some of our findings.

1. Wheeling charges under the utilities' proposal will be 87 percent higher than under an all-Federal system.

2. These excessive wheeling charges will be $728 million higher than Bureau wheeling charges over a 100-year period.

3. The planned utilities combination system ($91 million utility and $41 million Government invested) will require over twice the amount of appropriation of moneys from the Federal Treasury than required by an all-Federal system.

4. The "combination system" does not meet the criteria of the Bureau of Reclamation.

Mr. McMullin has forwarded this information directly to Chairman Hayden, but as a member of the committee who prepared the statement, I felt you would like to have a copy in advance in order to be familiar with its contents.

Very truly yours,

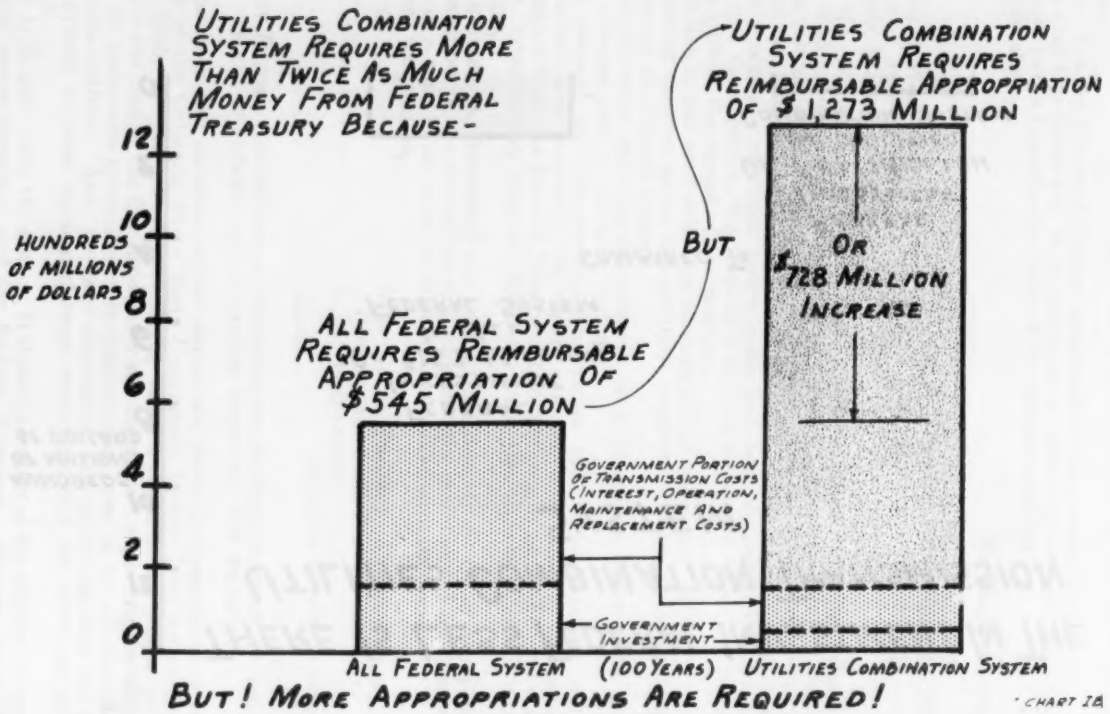
SALT RIVER PROJECT, AGRICULTURAL IMPROVEMENT AND POWER DISTRICT,
L. M. ALEXANDER,
Assistant General Manager.

STATEMENT BEFORE COMMITTEE ON APPROPRIATIONS SUBCOMMITTEE ON DEPARTMENT OF INTERIOR AND RELATED AGENCIES, U.S. SENATE

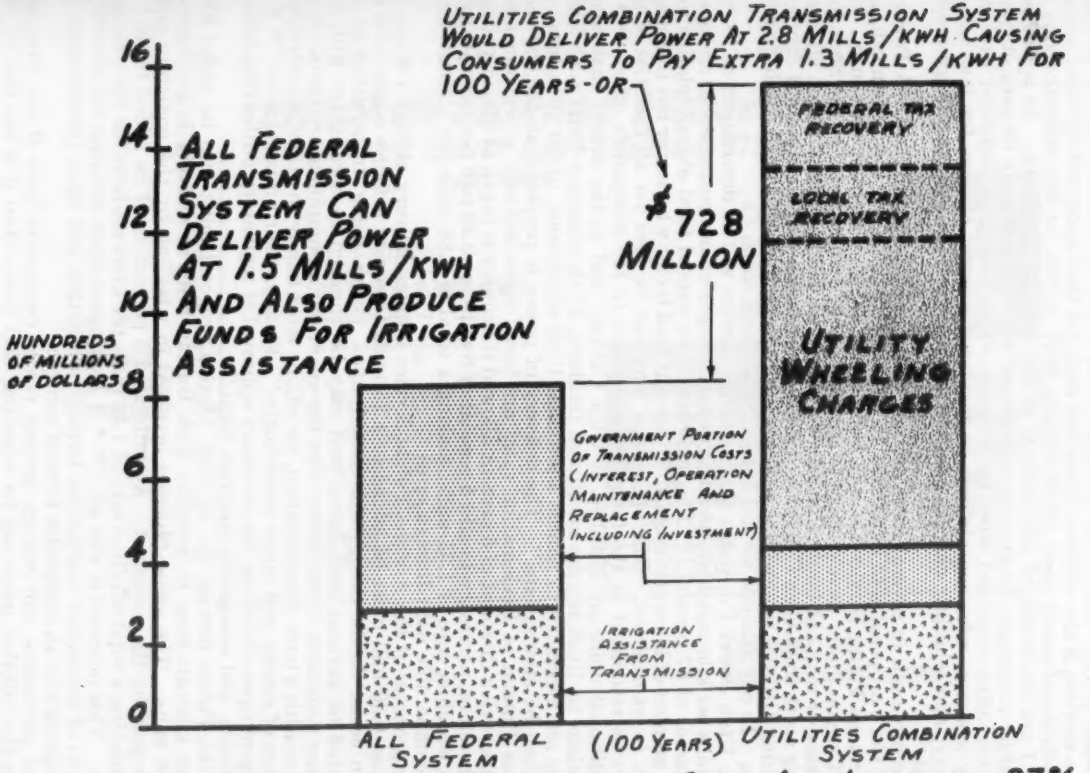
Mr. Chairman and members of the committee, since the appearance of representatives of the Colorado River Basin Consumers' Power, Inc., before you on April 12, 1960, we have received copies of offers by five of the major utilities operating in the area of the Colorado River storage project regarding the wheeling of power to preference customers over transmission lines to be constructed by those private utilities. Also, we have determined the additional cost the combination system imposes upon preference customers and its effect on project repayment.

Chart I A, B, and C tells the story. It shows the effect of the utilities' proposals on both the power consumer and the Federal Treasury. Despite the utilities' emphasis on saving Government appropriations for transmission line construction under their plan, chart I shows that the utilities' combination plan actually requires more than twice the amount of appropriation of money from the Federal Treasury. You will also note the utilities' combination transmission system requires consumer transmission costs of 2.8 mills per kilowatt-hour (total delivered power cost 7.3 mills per kilowatt-hour) as compared to 1.5 mills per kilowatt-hour (total delivered power cost 6 mills per kilowatt-hour) under the all-Federal system. This unnecessary rate penalty amounts to $728 million added cost to power consumers. However, these rates are necessary if required storage project irrigation assistance is maintained.

THERE IS LESS FEDERAL INVESTMENT IN THE UTILITIES COMBINATION TRANSMISSION SYSTEM
HUNDREDS OF MILLIONS OF DOLLARS
12
10
8
6
4
2
0
FEDERAL INVESTMENT OF $157 MILLION IN ALL FEDERAL SYSTEM
COMPARED TO
FEDERAL INVESTMENT OF $41 MILLION IN UTILITIES COMBINATION SYSTEM
CHART 1A


UTILITIES COMBINATION SYSTEM REQUIRES MORE THAN TWICE AS MUCH MONEY FROM FEDERAL TREASURY BECAUSE-
UTILITIES COMBINATION SYSTEM REQUIRES REIMBURSABLE APPROPRIATION OF $1,273 MILLION
BUT
OR $728 MILLION INCREASE
ALL FEDERAL SYSTEM REQUIRES REIMBURSABLE APPROPRIATION OF $545 MILLION
HUNDREDS OF MILLIONS OF DOLLARS
12
10
8
6
4
2
0
GOVERNMENT PORTION OF TRANSMISSION COSTS (INTEREST, OPERATION, MAINTENANCE AND REPLACEMENT COSTS)
GOVERNMENT INVESTMENT
ALL FEDERAL SYSTEM (100 YEARS) UTILITIES COMBINATION SYSTEM
BUT! MORE APPROPRIATIONS ARE REQUIRED!
* CHART 1B

84750 60 — 43


UTILITIES COMBINATION TRANSMISSION SYSTEM WOULD DELIVER POWER AT 2.8 MILLS/KWH CAUSING CONSUMERS TO PAY EXTRA 1.3 MILLS/KWH FOR 100 YEARS - OR
$728 MILLION
ALL FEDERAL TRANSMISSION SYSTEM CAN DELIVER POWER AT 1.5 MILLS/KWH AND ALSO PRODUCE FUNDS FOR IRRIGATION ASSISTANCE
HUNDREDS OF MILLIONS OF DOLLARS
16
14
12
10
8
6
4
2
0
FEDERAL TAX RECOVERY
LOCAL TAX RECOVERY
UTILITY WHEELING CHARGES
GOVERNMENT PORTION OF TRANSMISSION COSTS (INTEREST, OPERATION MAINTENANCE AND REPLACEMENT INCLUDING INVESTMENT)
IRRIGATION ASSISTANCE FROM TRANSMISSION
ALL FEDERAL SYSTEM
(100 YEARS)
UTILITIES COMBINATION SYSTEM
AND - CONSUMER TRANSMISSION COSTS ARE INCREASED 87%
CHART 1C

The charts do not include wheeling charges which California-Pacific Utilities Co., the Western Colorado Power Co., and Southern Wyoming Utilities may oppose as they have not submitted proposals. Mr. E. M. Naughton, president and general manager of the Utah Power & Light Co., in his testimony before your committee included these utilities in his schedule of construction by private utilities.

Chart II is included for comparison. You will recall that it was presented to your committee on April 12. This chart contained our estimates of the effect on storage project and power consumer costs of the combination system proposed by the utilities, if the utilities charge full costs for their proposed wheeling service. The additional power costs ($728 million, $637 million, or $91 million) shown on chart I are the result of our analysis of the utilities' proposals. In accordance with these proposals, the analysis includes all wheeling necessary for project operation, including increased wheeling charges where energy is delivered over two utility systems, wheeling charges on displaced energy, charges for low voltage delivery, and wheeling charges on the energy needed to firmup storage project output.

The proposals in several cases are not clear. For example, the Utah Power & Light Co.'s proposal is to build only to the Utah-Arizona line from the north, and the Arizona Public Service Co. will build to the same point from the south. The Glen Canyon power development is approximately 5 miles south of the State line. This may or may not imply that the wheeling cost will be pyramided on all power flowing north from Glen Canyon. This same situation may be present if Southern Wyoming Utilities is unwilling to cross the State line into Utah to reach Flaming Gorge. In our analysis we did not pyramid these costs.

The Utah Power Co. states that wheeling service will be determined at "* * * 1.55 mills per kilowatt-hour based on delivery to preference customers at an annual load factor of 57 percent." This may imply an annual fixed charge relating to a given number of kilowatt-hours at 57-percent load factor whether or not that much energy is transmitted. The offer itself may not be firm for all facilities of the project as evidenced in the following statement in the company's offer, "* * * as additional units are installed at Glen Canyon, and to the extent that power allocations to Utah require additional facilities, Utah company build such facilities, as are necessary to handle additional Utah allocations, under such terms as may then be appropriate." The delivery of power is proposed at 138,000 volts whereas Bureau of Reclamation rates are based upon delivery at customer low voltages with a discount of 5 percent allowed if delivery is taken at higher voltage. It is therefore, necessary to add 5 percent of 6 mills, or 0.30 mill per kilowatt-hour to the wheeling rate of 1.55 mills, making a total of 1.85 mills per kilowatt-hour to be comparable with Bureau rates.

The proposal of the Arizona Public Service implies delivery at high voltage, so here also 0.30 mill must be added to 1.25 mills to secure a figure comparable to Bureau costs. Again this rate is based upon power being transmitted at an estimated 60 percent load factor and may be changed in accordance with the following statement in its letter. "In the event our assumptions are too much at variance with a later determination, we will be most happy to examine such determination of energy and quote accordingly." Finally, their proposal is all, "* * * contingent upon obtaining the necessary approval of regulatory authorities having jurisdiction, and acceptable contract form."

To the Public Service Co. of New Mexico proposal must also be added 0.30 mill per kilowatt-hour to compare with Bureau rates as delivery is proposed at 115,000 volts. The value of losses involved in wheeling by the company must also be paid by the consumer. An estimated 5 percent must be added to the 1.2 mills, making a total effective rate of 1.56 mills per kilowatt-hour for the wheeling service. This proposal is also all, "* * * contingent upon securing the necessary approval of regulatory authorities having jurisdiction and upon incorporation of the proposal into an acceptable form of contract."

What protection will storage project power consumers have if the Congress accepts the utilities' proposals for wheeling, and then, when it is too late for the Bureau of Reclamation to build the lines—finds that one or more of the utilities have not stated full costs with a resulting order by the regulatory commission to increase utility wheeling charges?

In preparing chart I we made a study to determine the total cost that appears to be involved in the proposed utilities' combination transmission system, in order to compare it with an all-Federal system.

EFFECT ON STORAGE PROJECT
COMBINATION UTILITY AND FEDERAL SYSTEM
100 YEARS
HUNDREDS OF MILLIONS OF DOLLARS
18
16
14
12
10
8
6
4
2
0
ALL FEDERAL
SYSTEM at 6 Mills/KWH
PRODUCES
REQUIRED IRRIGATION ASSISTANCE
OVER
$1 Billion
CONSUMERS PAY EXTRA 1.3 Mills/KWH FOR 100 YEARS
OR
$637 MILLION
UTILITY WHEELING REDUCES ASSISTANCE $637 Million
WATER PROJECTS SLICED
REQUIRED IRRIGATION ASSISTANCE RESTORED
BUT!
COMBINATION
SYSTEM at 6 Mills/KWH
CHART II

The utilities estimate they will invest about $90 million in its proposed combination transmission system in which the Bureau would invest only $41 million. The aggregate wheeling charge under the utilities' proposal will be 2.8 mills per kilowatt-hour. In comparison, the Government's total wheeling charges on an all-Federal system are estimated to be 1.5 mills per kilowatt-hour, a portion of which is applied to irrigation assistance after the original investment is repaid. The utilities offer a series of individual proposals which collectively require an amount equivalent to 1.9 mills per kilowatt-hour, and no part of this is available for irrigation assistance. To provide the same irrigation assistance available with an all-Federal system requires an additional 0.4 mill per kilowatt-hour. In addition, the Bureau must still repay its $41 million at a rate of 0.5 mill per kilowatt-hour resulting in a total wheeling cost of 2.8 mills per kilowatt-hour as compared to the 1.5 mills per kilowatt-hour for the all-Federal system.

The committee should be advised that it is not possible to consider each one of the utilities' offers on an individual basis. In several cases, to determine the cost of wheeling it is necessary to add the wheeling rates of two utilities in order to determine the cost of power delivered. One example is the Flaming Gorge project where a line proposed by the Southern Wyoming Utilities extends from Flaming Gorge to Rock Springs, and from this point additional lines proposed by the Pacific Power & Light Co. extend to load centers in Wyoming. Wheeling charges, therefore, may be paid to both utilities. In the area near Four Corners, New Mexico, not only does Arizona Public Service Co. require payment for almost negligible distances of wheeling at full wheeling rates for power displaced at Four Corners plant, but immediately there must be added thereto wheeling rates proposed by the Public Service Co. of New Mexico for power flowing to Albuquerque.

In like manner most of the power flowing into Colorado must pay full wheeling rates for power displaced at the Four Corners plant and then pay an additional wheeling charge to cover delivery over lines of the Public Service Co. of Colorado. The offer of this company proposes a rate of 1 mill per kilowatt-hour for each 50 miles of wheeling. The average wheeling distances involved in the State of Colorado are probably in the range of from 50 to 100 miles and, therefore, 2 mills per kilowatt-hour must be paid for that portion of the wheeling service. In these two cases cited, the wheeling rates total 2.54 mills per kilowatt-hour for power delivered to Albuquerque and 2.98 per kilowatt-hour for power delivered over the Public Service Co.'s system in Colorado.

By letter of January 19, 1960, Mr. E. O. Larsen, regional director of the Bureau of Reclamation at Salt Lake City, wrote Mr. Naughton setting out the following principles which must be followed in considering the proposal of the utilities.

"1. Lines must be of sufficient capacity to assure delivery of available power.

"2. There must be no interference with the ability of the Bureau to serve preference customers to the extent they would be served by federally constructed lines.

"3. Backbone lines must provide suitable integration among Federal project power facilities at the time required to meet project objectives, and project use must at all times be the overriding consideration.

"4. Charges made for delivery of power must not adversely affect project feasibility and payout, and particularly must be such as not to reduce quantity or timing of irrigation assistance.

"5. If utilities construct the backbone high-voltage transmission lines, they must accept also the responsibility of providing transmission for delivery at lower voltages to load centers of preference customers to the same extent as would prevail under a federally constructed system."

It is obvious that the lines proposed by the utilities as indicated in figures 1, 2, and 3 of the submission made by Mr. E. M. Naughton before this committee on April 12, 1960, are not in all cases of sufficient capacity to assure delivery of available power. This is apparent, for instance, in the lines to Arizona. In order to effect the complete use of available power in the early years of the project in accordance with preference laws, customers' load in Arizona must be able to absorb far greater amounts of power than can be transmitted by the utilities' proposed system from Glen Canyon to Arizona load centers. Thus, principle 1 is not met. It follows that principle 2 is also not met.

Deficient transmission line capacity also makes it impossible for principle 3 to be satisfied. Principle 4 is obviously not attained, since the repayment of the project as previously set out is most adversely affected, unless the preference customer wheeling costs are increased to cover this deficiency and finally, principle 5 is completely ignored in the utilities' proposals.

In this same letter the following is quoted from the pertinent statements contained in congressional committee reports, such as House docket No. 1087, 84th Congress:

"Therefore, the committee expects the proposal by the private power companies for cooperation in the development to be carefully considered by the Department of the Interior and the electric power and energy of the project to be marketed, so far as possible, through the facilities of the electric utilities operating in the area, *provided, of course, that the power preference laws are complied with and project repayment and consumer power rates are not adversely affected.*" [Italic added.]

From the foregoing analysis of the cost that would be imposed upon power consumers under the utilities' proposal, it is obvious that consumer power rates are adversely affected.

The utilities have claimed that wasteful duplication will result if a Federal transmission system for the delivery of storage project power is built. In reality, except for small sections built for other purposes, the utilities' system is as yet a paper plan.

The results of our analysis of the utilities' proposals for wheeling and our review of the utilities' combination system proposed for delivering Colorado River storage project power to preference customers leave us no logical choice but to again request this committee to add $5 million to the transmission division for fiscal year 1961 for construction by the Bureau of the lines from Flaming Gorge to Oak Creek, Colo., and from Glen Canyon to Curecanti, Colo., via Farmington, N. Mex. All interested parties agree that these lines should be constructed by the Bureau. In addition, we request additional funds be provided for fiscal year 1961 for surveys, designs, and rights-of-way for lines from Glen Canyon to Phoenix, from Farmington to Albuquerque, from Glen Canyon to Provo and Vernal, and from Flaming Gorge to Sinclair. These lines are not only needed for marketing of power in the upper and lower basins but also for the proper interconnection of Federal powerplants. Starting these lines in fiscal year 1961 is essential in order to have transmission facilities available when power is ready to be marketed.

Prepared by a committee of the Colorado River Basin Consumers' Power, Inc.:

W. BARRY HUTCHINGS,
Vice President, CRBCP, Inc., and Utah Delegate.
L. M. ALEXANDER,
Engineering Committee, Member, CRBCP, Inc.
H. F. MCPHAIL,
Kuljian Corp., Consultant to CRBCP, Inc.

ARIZONA PUBLIC SERVICE CO.,
Phoenix, Ariz., May 2, 1960.

Hon. CARL HAYDEN,
U.S. Senate, Washington, D.C.

DEAR SENATOR HAYDEN: After returning to Phoenix, I was able to read Mr. Victor I. Corbell's statement on the Colorado River storage project more carefully and find it needs some corrective comment on my part to set the record straight.

Page 1, paragraph 3, and page 2, paragraph 1

Here, the committee report, House Document 1087, is referred to that any proposal by the utilities must meet power preference laws, project repayment and power rates not adversely affected. Later the statement follows. "The construction proposed by the utilities on October 1, 1959, does not meet these requirements."

Under our proposal for wheeling power preference laws will be complied with, project repayment and consumer rates will be no higher if our wheeling charge is less than U.S. Bureau of Reclamation costs.

Page 2, paragraph 2

Here the statement reads "storage project power in excess of the initial needs of preference consumers in Colorado, New Mexico, Utah, and Wyoming can be absorbed immediately, at firm prices, by Arizona preference customers, who are willing to release to the upper basin in the future under an agreed-to formula."

The following is a tabulation of power available to Arizona as per the most recent estimate of the U.S. Bureau of Reclamation and other preference users:

	Megawatts
1963	0
1964	194
1965	496
1966	743
1970	609
1976	234
1979	0

During 1964 and 1976 this lesser amount can be absorbed by Arizona preference users. During 1965, 1966, and 1970 these amounts can be absorbed by replacing Hoover deficiency, sale to Arizona preference users, shutting down present steam capacity or use present steam capacity as spinning reserve.

As to an agreed upon formula for release of power by Arizona to upper basin in the future, our wheeling offer does the same thing, incidentally. I am advised the APA has never agreed to such a release formula.

Page 2, paragraph 3

Here is stated "The utilities have not proposed nor indicated an interest in building a transmission system which will provide for delivery of power to preference customers in any such manner."

Our proposal has been made to provide all the above and at a meeting with the U.S. Bureau of Reclamation we were in agreement as to what the requirements were in this respect so we could quote a wheeling cost.

Page 2, paragraph 4

Here is stated that "preference consumers have joined to seek, under existing law, all project power at firm rates as soon as it is available. The utilities operating in the area have joined in an offer to absorb project power but they have not said they are willing to pay firm prices."

The utilities have offered to buy firm power. Arizona Public Service has offered to buy power at firm price through the Arizona Power Authority who has requested an allocation from the U.S. Bureau of Reclamation, and Utah and Colorado utilities have also offered to buy power in their letters to Secretary Seaton.

We agree that sale of power at firm price enhances project development and payout. The inference is that the utility companies are not willing to pay firm prices which may force a secondary sale to the utilities and such sale can lose as much as $50 million in potential revenue to the Federal Government. Conversely we do not believe preference customers can nor will they buy secondary power at firm prices. I can't see how we can be accused of this loss when there has to be a secondary power sale.

Page 3, paragraph 1

Here mention is made, "with Bureau construction, an amount equal to the amortization component of transmission system cost can be applied to water development after the original cost of the system has been recovered, without change in consumer power rates, to yield over the full construction and payment period as much as $204 million," and consequently a reduction in project repayment ability under the utility proposal.

Predicated on estimates supplied by the U.S. Bureau of Reclamation we have reestimated the repayment schedules under our wheeling proposal and find that the project can be repaid 6 to 8 years sooner under our proposed plan.

Furthermore, the accumulated surplus revenues by the year 2058 are virtually the same under both plans.

Page 3, paragraph 5

Here it is stated that the Salt River project has enhanced the economy in central Arizona. The original Federal investment has been repaid for the 242,000-acre project and it is claimed over the last 25 years residents of Maricopa County have paid Federal taxes exceeding $1 billion. On the other hand, our company serves about 400,000 to 500,000 other irrigated acres in the State and these farmers and residents of the areas pay the same kind of taxes, and in addition our company serving these customers over the same period paid the same kind of taxes.

Page 4, paragraph 1

We, too, want power available at the lowest possible cost. We in Arizona have offered a wheeling charge of 1 mill based upon the estimated average output of the project's plants. The U.S. Bureau of Reclamation's cost if it should build a complete high voltage transmission system would be 1.75 mills per kilowatt-hour. It is claimed that consumer power costs would be increased as much as $433 million over the Bureau cost for such service if the wheeling charge is in accordance with usual utility ratemaking procedure. May I again point out our wheeling offer is lower than the U.S. Bureau of Reclamation cost.

Page 4, paragraph 2

Here it is claimed that the project repayment ability is dangerously reduced by the sum of $204 million and $433 million and to keep the project whole could necessitate an increase in power rates equal to this total of $637 million, also that we had suggested this approach. The utilities did not suggest the $637 million scheme as portrayed.

Page 4, paragraph 3

Statements were made that utilities will not be customers of the storage project, that they have no reason to build a transmission system and that they expect to extract a profit from preference customers.

The Bureau of Reclamation has not formulated detailed marketing plans nor have they executed any contracts. As to the utilities' reasons for building a transmission system, we point out that our proposed system will integrate with long-range plans for supplying power considerably in excess of the additions to be made in connection with the storage project. Lastly, as to the extraction of a profit, we do not feel that a profit is inappropriate nor will it be detrimental to the project considering that we are improving the payout schedule.

Page 5, paragraph 1

Here mention is made about interconnecting with the Hoover-Parker-Davis system. The utility companies' plan will accomplish this.

Page 5, paragraph 2

Here mention is made about interchange and connections to the north and other States. The Arizona and Utah utility companies are going to build a connecting line between their systems to avail themselves of their summer-winter diversity.

The preference customers to the the extent they have generating capability between them, too, can avail themselves of this summer-winter diversity regardless of who owns or operates the lines to wheel power and are not denied revenues as claimed for their own transactions. The utility companies are not denying the Federal Government of any revenue when they can perform their own service cheaper and still pay taxes.

Page 5, paragraph 3

We thoroughly agree as claimed that Arizona preference users have a major interest in securing power, low cost, observance of preference laws, and project repayment.

Page 6, paragraphs 1, 2, and 3

Here is restated in summary the claims previously made regarding the $50 million possible loss of revenue due to secondary power sale; $204 million excess wheeling to be paid under the wheeling plan offered; $433 million increase in power rates over Bureau charges. Revenues denied the Federal Government from diversity of $60 to $100 million.

As explained above, we do not agree to these figures and economics

Page 7, paragraph 1

It is here recommended appropriation be made for the Flaming Gorge-Oak Creek and Glen Canyon-Farmington-Curecanti line.

We agree on both counts, with this reservation, that the size or capability of the Glen Canyon-Farmington section of line should be studied carefully to avoid building too large a line or two lines because other lines built and to be built by the utility companies, and location of the steam plants may greatly reduce the need of this tie line. The U.S. Bureau of Reclamation and utilities should study the line requirements under various loading, expanding conditions, and alternates.

Page 7, paragraph 2

Here instructions to the Secretary of the Interior are mentioned:

(*a*) To begin construction of the above lines to which we agree.

(*b*) Proceed in fiscal 1961 with plans, etc., in connection with other lines. We do not agree since we have offered a line-building program and wheeling and suggest the Secretary give serious consideration about accepting the proposal.

(*c*) Program and budget future lines. We do not agree until our plan has been given serious consideration by the Secretary.

Page 7, paragraph 3

Here we are completely in accord requesting the Secretary of the Interior to determine marketing area and price of power.

I also read the Harvey McPhail statement. It practically parallels the Victor Corbell statement so what I have said earlier applies here too. In addition:

Page 8, paragraph 1

Here mention is made about early development of Marble Canyon and the transferring of transmission lines to this project by the Federal Government when not needed for Glen Canyon after Arizona's power is released to the upper basin States. Our proposal of lines and wheeling quotation has allowance for such a plan of use for these lines to be put to.

Page 8, paragraph No. (1)

Here mention is made that our plan of lines does not achieve maximum power integration for the Federal projects. We believe it achieves full integration and our wheeling charge offer is less than the Federal equivalent.

The balance of the letter is repetition of the Corbell statement.

I hope this will assist you in clearing up some of the matters referred to in the statements.

Very truly yours,

WALTER T. LUCKING, *President.*

COLORADO RIVER STORAGE PROJECT

Chairman HAYDEN. A statement by Mr. B. H. Stringham, chairman of the Colorado River Development Association will be included in the record.

(The statement referred to follows:)

Mr. Chairman and members of the committee, my name is B. H. Stringham, I am chairman of the Colorado River Development Association, a nonprofit corporation of the State of Utah. The membership of the corporation consists of representatives from the 21 counties in the State of Utah which will be benefited by the development of the water resources of the Colorado River. The organization receives its financial support from these counties. The purpose of the corporation is to develop an interest on the part of the people of Utah in the compenhensive program proposed by the upper basin States for the development of the river.

The Colorado River being the last remaining undeveloped water resource of the State of Utah, the people of the 21 interested counties, and particularly the water users, are intensely interested in the prosecution of the plan by the Federal Government as outlined in Public Law 485 adopted by the 84th Congress. Their interest is now, and always has been, in the development of water from the river for irrigation, municipal, and industrial uses, and in the incidental development of power to help defray the high costs of building the participating projects. The State of Utah will enjoy future growth only to the extent that there is new water available.

There are several cooperatives and a few municipalities in the State which have a right under the act to preference in the sale of power. Their interest is that the Bureau sell to them power available from the project at the lowest possible cost.

It is our view that the rate at which the Bureau of Reclamation sells the power from the Colorado River storage project must be determined by a number of factors.

The Colorado River compact, the upper basin compact, and the Colorado Storage Project Act provide that water may be impounded and used for the generation of power, provided such use is subservient to the development and

consumptive use of water for agricultural, domestic, municipal, and industrial purposes. If a rate at which the power will be sold were determined solely on the basis of the cost of the storage dams and power generation facilities, the provisions of the law would not be complied with, because the generation of power would not assist in the development for consumptive use of water for the essential purposes enumerated above. The factors which must determine the price of the power from the Colorado project are the following:

(1) To provide sufficient revenues to pay the cost of operation and maintenance, including replacement costs, of the power facilities themselves.

(2) To provide sufficient revenue to pay for the construction cost of the major storage dams, including power generation facilities, within the time limit set by law.

(3) To provide sufficient revenue to pay, in conjunction with payments made directly by the water users, for the participating projects. These participating projects are the projects which actually put water on agricultural land, or deliver it for domestic, municipal, or industrial uses. It is of the utmost importance that this third requirement be met, for if it were not, the whole intent of the law would be circumvented. Without this increment of the power revenues to help pay for the development of water for consumptive use, the production of power would not be subservient to the development of water, but would become a primary end in itself.

We of the Colorado River Development Association worked diligently to obtain approval of the Colorado River storage project and participating projects. Our aim is, and has always been, the development of the water resources of the State of Utah, and we feel that this can only be accomplished by following the intent of the law and making the generation of power secondary to the development of water.

If the power rate is set on the basic principles I have outlined, it will return considerable benefits, and assure the continuing development of the resources of Utah and our sister States in the future.

As for the marketing of the power from the Colorado River project, I should like to go on record as endorsing the proposal for marketing the power which has been submitted by the Upper Colorado River Commission.

As for the construction of power transmission facilities, I feel that adequate funds should be provided for plans and studies and that any appropriations for actual construction of transmission facilities should be limited to those now mutually agreed upon by the Secretary of the Interior, the preference customers, and the private utilities of the area.

We support the President's budget for all features of the Colorado River storage project, and ask your favorable consideration in order that this desirable, and much needed development can be put into immediate use. In order to complete all facets of this water conservation project, it is necessary that the appropriations for general investigations and advance planning be increased over the amounts shown in the President's budget. Advance planning, if not kept current, could unnecessarily delay the project and thus add to the cost. With the great population increase we face in the Nation, and with the dependence the economy of our Nation has on the development and utilization of our natural resources, it seems imperative that we plan now, on a broad scale, to enable the immediate construction of all of the participating projects under the Colorado River storage project.

Work is now underway on the Vernal unit of the central Utah project, thanks to your kindness of last year. This unit serves the area near the vicinity in which I live, and may I urge your special consideration of the item for $2,189,000 provided in the President's budget for the continuation of the construction of this unit.

Your time and consideration are greatly appreciated.

INSERTIONS IN THE RECORD

Chairman HAYDEN. As I stated earlier the Department's comments on the House bill will be printed in the record as soon as they are received. The record will be held opened for several days for the insertion of statements.

AMENDMENTS REQUESTED BY THE DEPARTMENT

BUREAU OF RECLAMATION

GENERAL INVESTIGATIONS

(House hearings, pt. 2, pp. 84–166)

Appropriation 1960	$4,668,992
Estimate	4,650,000
House allowance	4,575,000
Restoration requested	75,000

(P. 8, line 17)

AMENDMENT REQUESTED

(1) Page 8, line 17 strike out "$4,575,000" and insert in lieu thereof "$4,650,000", the estimate, or an increase of $75,000 in the appropriation.

(2) Page 8, line 17 strike out "$3,375,000" and insert in lieu thereof "$3,450,000", the estimate, or an increase of $75,000 in the appropriation.

HOUSE REPORT

"Appropriation, 1960	$4,668,992
Estimate, 1961	4,650,000
Recommended, 1961	4,575,000
Comparison:	
Appropriation, 1960	−93,992
Estimate, 1961	−75,000

"A total of $50,000 programed under the engineering, methods, and materials research activity for the foreign currency program has been deleted in view of the fact that the direct appropriation has been denied as discussed under the following heading.

"The further reduction of $25,000 which the committee has made in the general investigations budget request can be expected to be offset by savings and slippages in this program."

JUSTIFICATION

Explanation of amendment (1).—The amendment restores the full amount of the $75,000 reduction made by the House in the budget estimate. This amount is for the following activity:

General investigations

Appropriation, 1960	$4,668,992
Budget estimate, 1961	4,650,000
House allowance, 1961	4,575,000
Restoration requested	75,000

A breakdown of the restoration request by objects of expenditure follows:

01	Personal services	$30,000
02	Travel	20,000
07	Other contractual services	10,000
08	Supplies and materials	15,000
	Total	75,000

Engineering methods and materials research program, $50,000.—Full restoration of the $50,000 reduction made by the House is requested.

Restoration is being requested of the funds for the special foreign currency program which will utilize foreign currency proceeds from the sale of surplus agricultural commodities for scientific research within certain countries. The foreign currencies are not available for use within the United States, however, and restoration of the $50,000 for the engineering methods and materials research activity is required to finance the administrative activities in this country including travel to and from points of embarkation.

General reduction, $25,000.—Full restoration of the $25,000 reduction made by the House is requested.

The Bureau's planning activities are carried out through a number of separate field offices located throughout the West. Because of the nature of the work

and the necessity of avoiding an overobligation of available funds, it is impossible to control the funds and work to the extent that all funds will be fully utilized during the year. As a result, it is unavoidable that a small amount of funds will remain unexpended at the end of the fiscal year in each of those offices regardless of the size of the program. The general investigations program has already been curtailed from a level of $5,323,000 of work actually accomplished in fiscal year 1959 to a level in fiscal year 1961 of $4,754,000, including anticipated contributions. This represents a reduction of $569,000, or about 10 percent, in the level of this activity resulting in a program that is a bare minimum to sustain a progressive and efficient reclamation program. The $25,000 reduction, therefore, would only aggravate this situation and create a further curtailment of the amount of the work that could be accomplished in fiscal year 1961.

Explanation of amendment (2).—The amendment increases to $3,450,000 the amount to be derived from the reclamation fund. The restoration requested is in line with amendment (1).

BUREAU OF RECLAMATION

GENERAL INVESTIGATIONS (SPECIAL FOREIGN CURRENCY PROGRAM)

(House Hearings, pt. 2, pp. 166–197)

Appropriation 1960	
Estimate	$4,957,000
House allowance	
Restoration requested	4,957,000

(P. 9, between lines 5 and 6)

AMENDMENT REQUESTED

Page 9, between lines 5 and 6 insert the following language, which language reinstates "$4,957,000", the estimate, or an increase of $4,957,000 in the appropriation:

"GENERAL INVESTIGATIONS (SPECIAL FOREIGN CURRENCY PROGRAM)

For purchase of foreign currencies which accrue under title I of the Agricultural Trade Development and Assistance Act of 1954, as amended (7 U.S.C. 1704), for the purposes authorized by section 104(k) of that Act, to remain available until expended, $4,957,000, of which not less than $4,522,000 shall be available to purchase currencies which the Treasury Department shall determine to be excess to the normal requirements of the United States: Provided, That this appropriation shall not be used for the purchase of currencies available in the Treasury for the purposes of section 104(f) of said Act unless such currencies are excess to the normal requirements of the United States."

HOUSE REPORT

"The budget request of $4,957,000 proposed for this new program has been denied. The testimony to the committee was to the effect that none of the research programmed in foreign countries would result in findings which could not otherwise be arrived at in this country in the regular bureau engineering methods and materials research program. The committee has examined in considerable detail this proposal for use of foreign currencies, and while it does not oppose the general idea of making use of otherwise idle foreign currencies, it believes that there should be more productive end results for the expenditure of such funds than appears evident in this particular program."

JUSTIFICATION

The amendment restores the language deleted by the House and restores the full amount of the $4,957,000 reduction made by the House in the budget estimate. This amount is for the following activity:

General investigations (special foreign currency program)

Budget estimate, 1961	$4,957,000
Restoration requested	4,957,000

A breakdown of the restoration request by objects of expenditure follows:

02	Travel	$84,000
07	Other contractual services	4,843,000
08	Supplies and materials	30,000
	Total	4,957,000

It is requested that $4,957,000 be restored for the special 3-year foreign currency program. The House committee, while not opposed to the general idea of making use of otherwise idle foreign currency, stated its belief that there should be more productive end results from the expenditure of such funds than appeared evident in this particular program. The committee report cited testimony to the effect that none of the research programed in foreign countries would result in findings which could not otherwise be arrived at in this country in the regular Bureau research program.

Although it is correct that the work could be performed in the regular program and similar findings obtained, this could not be done for many years as funds and personnel are not available. The foreign currency program offers the opportunity to inaugurate fundamental studies which, although of substantial potential value, have had to be shelved in favor of those of more immediate need. The resulting findings would thus supplement, be a valuable adjunct to, and expedite our domestic program.

From citations in the technical literature, and from knowledge of the qualifications of the individuals concerned, there is ample evidence that, in the basic type of research, leading scientific minds are often to be found abroad. The ability to bring their abilities to bear on our particular problems would be one of the primary benefits to be gained through this program.

BUREAU OF RECLAMATION

Construction and Rehabilitation

(House hearings, pt. 2, pp. 198–446)

Appropriation 1960	$132,466,171
Estimate	173,950,000
House allowance	166,444,880
Restoration requested	7,505,120

(P. 9, line 10)

AMENDMENT REQUESTED

Page 9, line 10 strike out "$166,444,880" and insert in lieu thereof "$173,950,000", the estimate, or an increase of $7,505,120 in the appropriation.

HOUSE REPORT

"Appropriation, 1960	$132,466,171
Estimate, 1961	173,950,000
Recommended, 1961	166,444,880
Comparison:	
Appropriation, 1960	+33,978,709
Estimate, 1961	−7,505,120

"Funds appropriated under this heading are distributed to projects and activities as shown in the following table:

State and project	Allocation	
	Construction	Advance planning
Arizona:		
Boulder Canyon project	$2,857,000	
Colorado River front work and levee system	769,500	
Gila project	4,219,000	
California:		
Central Valley project	61,138,100	
Colorado River front work and levee system. (See Arizona.)		
Klamath project. (See Oregon.)		
Washoe project. (See Nevada.)		
Colorado:		
Collbran project	5,140,000	
Trinidad project		$5,000
Idaho:		
Minidoka project, north side pumping division	429,000	
Palisades project, Burns Creek Dam and powerplant	(1)	
Spokane Valley project. (See Washington.)		
Nevada:		
Boulder Canyon project. (See Arizona.)		
Washoe project, Prosser Creek Dam and Reservoir	3,137,000	
Washoe project, initial phase		149,000
New Mexico:		
McMillan Delta project	100,000	
Middle Rio Grande project	1,729,000	
Oklahoma: Washita project	6,960,000	
Oregon:		
Crooked River project	2,235,000	
Klamath project	868,000	
Rogue River Basin project, Talent division	2,450,000	
Vale project, Bully Creek extension		121,000
Texas:		
Lower Rio Grande rehabilitation project, La Feria division	500,000	
Lower Rio Grande rehabilitation project, Mercedes division	2,500,000	
San Angelo project	11,000,000	
Utah:		
Provo River project	825,000	
Weber Basin project	8,183,000	
Washington:		
Chief Joseph Dam project, Greater Wenatchee division	2,000,000	
Columbia Basin project	4,606,000	
Spokane Valley project		100,000
Drainage and minor construction	800,000	
Rehabilitation and betterment	3,609,000	
Subtotal, construction and rehabilitation (exclusive of Missouri River Basin)	126,054,600	375,000
MISSOURI RIVER BASIN PROJECT		
Colorado: Narrows unit		48,800
Kansas:		
Almena unit	1,000,000	
Bostwick division. (See Nebraska.)		
Cedar Bluff unit	1,400,000	
Glen Elder unit		133,000
Kanopolis unit		1,000
Webster unit	617,000	
Montana:		
East Bench unit	2,800,000	
Helena Valley unit	565,000	
Jefferson unit		336,000
Yellowtail unit	2,500,000	
Nebraska:		
Ainsworth unit	1,500,000	
Bostwick division	821,000	
Cedar Rapids division		252,800
Farwell unit	7,700,000	
Frenchman-Cambridge division	5,439,000	
North Dakota: Garrison diversion unit		225,000
South Dakota:		
Crazy Horse, Tower, Greenwood, and Yankton units		109,400
Garrison diversion unit. (See North Dakota.)		
Oahe unit		18,000
Wyoming:		
Glendo unit	775,280	
Owl Creek unit	455,000	
Yellowtail unit. (See Montana.)		

[1] $487,500 of previously appropriated funds available.

State and project	Allocation	
	Construction	Advance planning
MISSOURI RIVER BASIN PROJECTS—continued		
Transmission division	$24,415,000	
Drainage and minor construction	598,000	
Subtotal, construction and advance planning (Missouri River Basin)	50,585,280	$1,124,000
Investigations		656,000
Other department agencies		2,650,000
Subtotal, construction and rehabilitation	181,444,880	
Total, Missouri River Basin project	50,585,280	4,430,000
Undistributed reduction based on anticipated delays	−15,000,000	
Total, construction and rehabilitation	166,444,880	

"REDUCTIONS IN BUDGET ESTIMATES

"*Garrison diversion unit, North and South Dakotas.*—The request of $445,000 for continuation of advance planning on the Garrison diversion unit has been reduced to $225,000. Studies undertaken to date on this unit indicate that in order to achieve even minimum economic feasibility the project will have to be radically altered from the originally authorized plan. It has been submitted again to the legislative committee for reauthorization, although the Bureau of the Budget has refused to recommend favorable action on it because of its marginal economics. Under these circumstances, the committee feels that it is entirely appropriate to reduce the level of expenditures substantially until a final determination has been made as to whether this project should proceed or be abandoned.

"*Central Valley project.*—An appropriation of $61,138,100 is recommended. This is a reduction of $168,000 in the budget estimate of $61,306,100. Funds programed for the Merced and Mendota wildlife areas have been deleted. Work on this portion of the project is a joint undertaking by the State of California and the Federal Government. It is the committee's opinion that the benefits of this development are such that it is reasonable to expect the State of California to assume the full cost.

"The committee endorses the principle of net billing in the sale and purchase of electric power between the utilities, the preference customers, and the Central Valley project, as outlined during the course of the hearings, with the understanding that the billing will be on a monthly basis.

"*Columbia Basin project.*—The committee recommends an appropriation of $4,606,000 for this project, a reduction of $1,494,000 in the budget estimates of $6,100,000. The reduction applied by the committee will stop all work not now underway except one item of $47,000 for flashboards for the crests of the Grand Coulee Dam. It also deletes the $450,000 programed for continuing the study on the East High Canal area. At the moment there is no alternative to bringing new construction work on this project to a close until satisfactory amended repayment contracts have been executed.

"With respect to the East High Canal area, there seems little likelihood that the repayment problems already being experienced on other parts of the project could be avoided on the additional lands which this element of the project would put under irrigation.

"*Weber Basin project.*—The committee recommends a reduction of $100,000 in the budget estimate of $8,283,000. The effect of this reduction is to limit the funds programed for recreation facilities to $110,000 instead of the $210,000 which was requested. As in the case of the previously discussed Yazoo Basin project, the purpose of this reduction is to hold the Federal investments in recreational facilities to a reasonable minimum until a comprehensive policy with respect to the provision for such facilities, as called for previously in this report, has been supplied the committee.

"*Vale project, Bully Creek extension, Oregon.*—An appropriation of $121,000 is recommended, a reduction of $52,000 in the budget estimate of $173,000. The effect of this action is to hold the project in the planning stage and preclude the start of land acquisition until a repayment contract has been executed. Testimony given the committee at the time of the hearings was that such a contract

is not expected until March 1961. Past experience indicates that it could be later.

"*Drainage and minor construction.*—A reduction of $121,120 is recommended in this item. It is anticipated that this minor reduction will be compensated for by unobligated carryover of which $86,000 is specifically planned in the budget.

"*Missouri Basin project—Transfers to other agencies.*—An appropriation of $2,650,000, a reduction of $350,000 in the budget estimate of $3 million, is recommended. This holds the level of the work relating to the Missouri River Basin project which is done by other Interior Department agencies to the current year level. A portion of this reduction is to be applied to the Garrison diversion unit, which is being reduced in scope as discussed previously. The work which this appropriation supports is done by such agencies as the Geological Survey, Bureau of Mines, the National Park Service, Bureau of Indian Affairs, and others. The scope of the work is supposed to be directly related to the water resources projects construction program in the basin. The justifications given to the committee for these programs have failed in a number of instances to directly relate the activities to be financed to the construction programs.

"No part of the reduction is to be applied to the archeological investigations in reservoir sites under the National Park Service program.

"*General reduction.*—A reduction of $15 million is recommended to be compensated for by savings and slippages anticipated in the total construction program. Of this amount, $10 million was projected in the budget estimates. Experience with this program indicates that the increase of $5 million in the general reduction figure will not affect progress of the program.

"OTHER ACTIONS AND RECOMMENDATIONS

"*Western Iowa transmission lines.*—The budget includes a total of $2,380,000 for the lines from Sioux City to Creston and to Spencer. The committee received testimony to the effect that there is a conflict over the question of the routing which the lines should take. It is understood that there is some sentiment for placing the transmission lines along section lines rather than on diagonal routes, which would cut across farmlands. It was testified that the added cost of adhering to section lines would be substantial and that lines running diagonally would not necessarily disturb a greater acreage of agricultural lands than would construction along section lines, and should be less inconvenient to landowners. Further, it is noted by the committee that the regulatory agency in the State of Iowa has on previous occasions not hesitated to endorse and approve utility transmission line construction across the shortest available routes instead of on section lines.

"The committee expects this question to be resolved promptly in the manner least costly to the Federal Government.

"*Pump-back power units.*—The committee's attention has been directed to several hydroelectric power projects wherein water is lifted by pumps to storage areas during offpeak periods and then released to generate power during peak periods. It is suggested that a study of the possibility of supplementing power production at existing Federal projects may be of interest to the Congress. The committee requests a preliminary report from the Secretary outlining the scope of such a study and its approximate cost."

JUSTIFICATION

The amendment restores the full amount of the $7,505,120 reduction made by the House in the budget estimate. This amount is for the following activity:

Statement of House action on appropriation of new funds and amendments requested, fiscal year 1961

Project or activity	Appropriation, 1960	Budget estimate, 1961	House allowance, 1961	Amendments requested, 1961	Total appropriation requested, 1961
Advance planning	[1] ($183,605)	$254,000	$254,000		$254,000
Gila project, Arizona	3,304,305	4,219,000	4,219,000		4,219,000
Colorado River front work and levee system, Arizona-California	370,500	769,500	769,500		769,500
Boulder Canyon project, Arizona-Nevada	2,754,375	2,857,000	2,857,000		2,857,000

[1] $183,605 financed from the "General investigations" funds in fiscal year 1960.

Statement of House action on appropriation of new funds and amendments requested, fiscal year 1961—Continued

Project or activity	Appropriation, 1960	Budget estimate, 1961	House allowance 1961	Amendments requested, 1961	Total appropriation requested, 1961
Central Valley project, California	$40,373,554	$61,306,100	$61,138,100	$168,000	$61,306,100
Collbran project, Colorado	4,295,730	5,140,000	5,140,000		5,140,000
Minidoka project, North Side Pumping Division, Idaho	797,550	429,000	429,000		429,000
Palisades project, Burns Creek Dam and powerplant, Idaho	487,500				
Washoe project, Nevada-California	678,750	3,137,000	3,137,000		3,137,000
McMillan Delta project, New Mexico	29,250	100,000	100,000		100,000
Middle Rio Grande project, New Mexico	1,316,250	1,729,000	1,729,000		1,729,000
Washita Basin project, Oklahoma	9,289,304	6,960,000	6,960,000		6,960,000
Crooked River project, Oregon	2,684,175	2,235,000	2,235,000		2,235,000
Rogue River Basin project, Talent Division, Oregon	2,367,093	2,450,000	2,450,000		2,450,000
Vale project, Bully Creek extension, Oregon		173,000	121,000	52,000	173,000
Klamath project, Oregon-California	508,950	868,000	868,000		868,000
Lower Rio Grande rehabilitation project, La Feria Division, Texas		500,000	500,000		500,000
Lower Rio Grande rehabilitation project, Mercedes Division, Texas	1,394,250	2,500,000	2,500,000		2,500,000
San Angelo project, Texas	3,657,611	11,000,000	11,000,000		11,000,000
Provo River project, Utah	518,700	825,000	825,000		825,000
Weber Basin project, Utah	4,961,190	8,283,000	8,183,000	100,000	8,283,000
Chief Joseph project, greater Wenatchee division, Washington	414,375	2,000,000	2,000,000		2,000,000
Columbia Basin project, Washington	7,427,705	6,100,000	4,606,000	1,494,000	6,100,000
Drainage and minor construction	2,821,511	921,120	800,000	121,120	921,120
Rehabilitation and betterment	3,412,500	3,609,000	3,609,000		3,609,000
Subtotal, exclusive of Missouri River Basin	93,865,128	128,364,720	126,429,600	1,935,120	128,364,720
Missouri River Basin project:					
Ainsworth unit, Nebraska		1,500,000	1,500,000		1,500,000
Almena unit, Kansas		1,000,000	1,000,000		1,000,000
Bostwick division, Nebraska-Kansas	2,147,925	821,000	821,000		821,000
Cedar Bluff unit, Kansas	331,500	1,400,000	1,400,000		1,400,000
East Bench unit, Montana	300,000	2,800,000	2,800,000		2,800,000
Farwell unit, Nebraska	2,778,750	7,700,000	7,700,000		7,700,000
Frenchman-Cambridge division, Nebraska	4,009,134	5,439,000	5,439,000		5,439,000
Glendo unit, Wyoming	1,571,300	775,280	775,280		775,280
Helena Valley unit, Montana	2,029,950	565,000	565,000		565,000
Owl Creek unit, Wyoming	982,663	455,000	455,000		455,000
Transmission division, various	16,635,684	24,415,000	24,415,000		24,415,000
Webster unit, Kansas	2,793,375	617,000	617,000		617,000
Yellowtail unit, Montana-Wyoming		2,500,000	2,500,000		2,500,000
Drainage and minor construction	567,450	598,000	598,000		598,000
Investigations	775,000	656,000	656,000		656,000
Advance planning	1,053,125	1,344,000	1,124,000	220,000	1,344,000
Subtotal, Missouri River Basin, Bureau of Reclamation	35,975,856	52,585,280	52,365,280	220,000	52,585,280
Other Department of the Interior agencies:					
Fish and Wildlife Service	233,025	280,000			280,000
Geological Survey	1,659,450	1,890,000			1,890,000
Bureau of Indian Affairs	174,037	196,400	[2]	350,000	196,400
Bureau of Land Management	207,675	249,600			249,600
Bureau of Mines	122,850	140,000			140,000
National Park Service	228,150	244,000			244,000
Subtotal, other Department of the Interior agencies	2,625,187	3,000,000	2,650,000	350,000	3,000,000
Total Missouri River Basin	38,601,043	55,585,280	55,015,280	570,000	55,585,280
Subtotal, construction and rehabilitation	132,466,171	183,950,000	181,444,880	2,505,120	183,950,000
Undistributed reduction based on anticipated savings and slippage		−10,000,000	−15,000,000	5,000,000	−10,000,000
Total construction and rehabilitation	132,466,171	173,950,000	166,444,880	7,505,120	173,950,000

[2] No distribution made by House of $350,000 reduction.

A breakdown of the restoration request by objects of expenditure follows:

01	Personal services	$608,000
02	Travel	22,000
03	Transportation of things	5,000
04	Communication services	6,000
05	Rents and utility services	4,000
06	Printing and reproduction	4,000
07	Other contractual services	173,000
	Services performed by other agencies	25,000
08	Supplies and materials	99,000
09	Equipment	36,000
10	Lands and structures	6,481,120
11	Grants, subsidies, and contributions	39,000
13	Refunds, awards, and indemnities	3,000
	Total	7,505,120

Central Valley project, California, $168,000.—Full restoration of the $168,000 reduction made by the House is requested.

The $168,000 restoration is required for completion of waterfowl conservation facilities authorized by Public Law 674 of the 83d Congress which have been in progress of construction for the past several years. Facilities being installed include levees and dikes at the Merced National Wildlife Area and at the Mendota Waterfowl Area Pool.

The authorizing legislation provided that funds not to exceed $400,000 be appropriated for the construction of these facilities. As of March 31, 1960, $185,522 had been expended under this authorization from funds provided in prior years appropriations. The restoration requested will allow completion of these facilities at which time they will be turned over to the State of California as provided in the authorizing act.

Vale project, Bully Creek extension, Oregon, $52,000.—Full restoration of the $52,000 reduction made by the House is requested to support the orderly plan of development provided in the budget estimate.

The $52,000 restoration is required to move this project into construction status with the initial purchases of right-of-way for borrow areas and access roads for Bully Creek Dam and Reservoir. Right-of-way purchases will be initiated after execution of the repayment contract scheduled for March 1961, so that these transactions can be completed in time to award the contract for construction of Bully Creek Dam and Reservoir at the start of fiscal year 1962. Deferral of right-of-way purchase until fiscal year 1962 will have the effect of delaying the project a full construction season since the construction contract cannot be awarded until the right-of-way has been acquired.

Weber Basin project, Utah, $100,000.—Full restoration of the $100,000 reduction made by the House is requested.

The $100,000 is required to provide for the full program of $210,000 in the budget estimate for the continuation of construction of basic recreational facilities being constructed in accordance with plans prepared by the Forest Service and approved by the Bureau of Reclamation and the National Park Service. The Pineview Reservoir area is readily accessible to major population centers and sustains nearly 300,000 visitations each year. Basic recreational facilities should be provided to insure minimum protection of the public from unsanitary and unsafe situations.

Columbia Basin project, Washington, $1,494,000.—Full restoration of the $1,494,000 reduction made by the House is requested.

The restoration requested is required for construction of operators' quarters in block 80, purchase of right-of-way in the vicinity of Moses Lake in connection with the operation of Potholes Reservoir, for a new contract in the continuing program of enlarging the Potholes Canal, for start of construction of the block 23 laterals, and for continuation of the East High Canal area studies. All of these items are within the provisions of the present repayment contracts and are concurred in by the irrigation districts.

The new contracts for Potholes Reservoir right-of-way and Potholes Canal enlargement are needed to insure continued efficient operation of the project. Development of block 23 in the south district will utilize existing canal capacity and is within the 479,000-acre program presently planned under the $281 million repayment contract limitation. It is the only irrigation block scheduled to start

in fiscal year 1961 and constitutes a very modest amount of land development during the period of the repayment contract negotiations.

Restoration of the amount requested for the East High Canal area studies will allow continuation of work necessary for formulation of the ultimate plan for the entire Columbia Basin project. Decisions in a number of critical areas are dependent on a timely conclusion of the East High Canal irrigation area studies. These include determination of the capacity and construction schedule for the second Bacon tunnel and siphon, development of the operation plan for both the equalizing reservoir (Banks Lake) and Potholes Reservoir and timing of the installation of additional pumping capacity at the Grand Coulee pump plant. An early and successful completion of the current irrigation repayment contract negotiations would make the need for these decisions particularly urgent.

The East High Canal irrigation area investigations were started in fiscal year 1958 and by the end of fiscal year 1960, about $900,000, or approximately one-half of the total estimated cost, will have been utilized on this work. Considerable additional expense to the Government would arise from any curtailment of the program at this stage. Existing contracts, such as aerial photography and mapping would have to be canceled and if later resumed would be at a significant added expense to the Federal Government. There would also be an added expense in reorganizing and retraining a competent staff if work is resumed at a later date.

Drainage and minor construction, $121,120.—Full restoration of the $121,120 reduction made by the House is requested.

The $121,120 restoration is required to provide the full allotment of $921,120 requested for completion type construction, investigations for defense of pending lawsuits, review of drainage plans, water supply and water right contract studies, and continuation of the preparation of as-built drawings and technical records. This program provides for these completion type activities on nine projects.

The House report stated that the reduction will be compensated for by unobligated carryover of which $86,000 is specifically planned in the budget. This $86,000 represents the balance of an amount appropriated several years ago for the completion of field investigations and analysis of data incidental to the preparation of designs for the drainage works and for post entry activity in connection with completion of the Coachella division of the all-American canal system. The amount then appropriated was the ceiling remaining under the repayment contract. Since the nature of this work is such that it must be accomplished over a period of several years the appropriation for future years has been placed in reserve and the annual requirement is made available each year. Unless it is intended to divert these funds to compensate for the reduction in the fiscal year 1961 request, restoration of the reduction is necessary to permit orderly continuation of this program of minor completion activities. If these funds remain diverted as proposed by the House, annual appropriations will be requested hereafter for the all-American canal system until the Government's obligation under the provisions of the repayment contract have been fully met.

Missouri River Basin project advance planning, Garrison diversion unit, $220,000.—Full restoration of the $220,000 reduction made by the House is requested.

The original plan of development for the Garrison diversion unit contemplated irrigating some 1 million acres of land in North and South Dakota by diverting from the existing Garrison Reservoir. Recently consideration, including discussions with local interests, has been given to a plan involving a smaller acreage and less expenditures. As a result, a report has been submitted to the Congress demonstrating the engineering and economic feasibility of a 250,000-acre development. The report points out, however, that any one of several plans to serve 250,000 acres would be physically and economically justified and could be constructed as a self-contained unit susceptible to enlargement in later years. Detailed studies are now underway to evaluate these various plans, to delineate the service areas to be included in the 250,000-acre development, and to reestablish a final plan for this area. Also, before construction can be initiated it will be necessary to complete repayment arrangements with local interests which would involve negotiation, execution, and court confirmation of repayment contracts with each of the individual districts involved. The investigations now underway are a necessary prerequisite to completion of repayment arrangements. Thus, a considerable amount of planning needs to be done to place the unit in readiness for start of construction.

The report referred to above indicates that the 250,000-acre development therein described would have a favorable benefit-cost ratio of 1.99 to 1, based on a 100-year economic analysis and total benefits. The report also points out the need for this development to stabilize and expand the fluctuating economy of this dry-farmed area and to replace some 566,000 acres of land in North Dakota that have been inundated by reservoirs. The unit has strong, statewide support as demonstrated by the fact that a water conservancy district covering some 25 counties has been established, 6 irrigation districts encompassing over 200,000 acres have been formed and are in the process of negotiating irrigation contracts, and additional irrigation districts are being organized. Legislation has been introduced in the Congress to modify the present authorization, and hearings are scheduled before the House Committee on Interior and Insular Affairs early in June 1960. Therefore, it is not unreasonable to assume that the necessary modification of the existing authorization will be forthcoming in the near future.

The level of the planning program on this unit has already been reduced from $830,000 in fiscal year 1958 to the present level of about $423,000. A further reduction to the level of $225,000 would increase the total cost of the investigation by resulting in very uneconomical operations due to a serious disruption of the present staff. It also would result in the loss of key personnel who have been engaged in this work for a number of years and would seriously delay the studies at a very critical time when the work of several years is approaching fruition. Restoration of these funds is needed to continue these studies efficiently to completion and to place the Garrison diversion unit in readiness for start of construction.

Missouri River Basin project, other Department of the Interior agencies, $350,000.—Full restoration of the House reduction of $350,000 is requested.

The report indicates that the scope of the work of the participating agencies in the Missouri River Basin project is to be directly related to the water resources projects construction program in the basin and that the justifications furnished the committee failed in a number of instances, to directly relate the activities to be financed to the construction programs. The work of the participating agencies is geared to the programs of the Bureau of Reclamation, other Interior bureaus, and the Corps of Engineers, and supplies basic information needed primarily by those agencies in planning, constructing and operating works for developing the water and land resources of the basin. It is also true, however, that the purpose of the Missouri River Basin project is for the full utilization of all the resources of the basin. This involves the provision of a full water supply for the area, the development of electrical energy, control of floods, the provision of facilities for recreation, fish and wildlife, navigation, municipal water, mineral development, Indian resources, and industrial growth. Accomplishment of the goals of basinwide development requires the undertaking of simultaneous programs of investigations, construction, and operation and maintenance. The seven agencies of the Department of the Interior participate in the program, as set out below, to insure a unified approach to all of the many factors involved in developing the basin resources to the fullest extent, with proper recognition of all problems influencing the basin program. Reduction of funds for work on Bureau of Reclamation projects does not, therefore, result in a corresponding reduction of the programs carried on by the participating bureaus.

Undistributed reduction based on anticipated delays, $5,000,000.—Full restoration is requested of the $5 million added by the House and included in the $15 million total undistributed reduction based on savings and slippage.

The tabulation on pages 25 and 26 of the House Appropriation Committee Report No. 1634 shows approval of a program totaling $181,444,880 to which is applied a reduction of $15 million based on anticipated savings and slippages leaving a new appropriation of $166,444,880.

It is estimated that, of the slippage which will develop in the construction and rehabilitation program during fiscal year 1961, approximately $10 million can be absorbed by transfer between projects without detriment to the program. The difference of $5 million between this estimate and the $15 million included in the House report, if not restored, will necessitate deferring award of construction contracts and restrict contract earnings, which will have the effect of delaying the construction program and prolonging completion of the work scheduled.

It is, therefore, requested that the undistributed reduction, based on anticipated delays, be restored to the $10 million included in the budget estimate.

BUREAU OF RECLAMATION

Operation and Maintenance

(House hearings, pt. 2, pp. 447–480)

Appropriation, 1960	$29,137,725
Estimate	31,900,000
House allowance	31,000,000
Restoration requested	900,000

(P. 10, line 6)

AMENDMENT REQUESTED

Page 10, line 6, strike out "$31,000,000" and insert in lieu thereof "$31,900,000", the estimate, or an increase of $900,000 in the appropriation.

HOUSE REPORT

"Appropriation, 1960	$29,137,725
Estimate, 1961	31,900,000
Recommended, 1961	31,000,000
Comparison:	
Appropriation, 1960	+1,862,275
Estimate, 1961	−900,000

"It is the committee's opinion that the minor reduction of $900,000 proposed in this program can be achieved through reasonable economies without seriously jeopardizing the adequacy of the overall operations."

JUSTIFICATION

The amendment restores the full amount of the $900,000 reduction made by the House in the budget estimate. This amount is for the following activity:

Operation and maintenance

Appropriation, 1960	$29,137,725
Budget estimate, 1961	31,900,000
House allowance, 1961	31,000,000
Restoration requested	900,000

A breakdown of the restoration request by objects of expenditure follows:

01	Personal services	$559,400
02	Travel	11,800
03	Transportation of things	2,600
04	Communication services	8,500
05	Rents and utility services	10,400
06	Printing and reproduction	700
07	Other contractual services	86,000
	Services performed by other agencies	7,800
08	Supplies and materials	78,000
09	Equipment	36,000
10	Lands and structures	71,600
11	Grants, subsidies, and contributions	34,900
13	Refunds, awards, and indemnities	800
15	Taxes and assessments	800
	Subtotal	909,300
	Deduct charges for quarters and subsistence	9,300
	Total	900,000

This reduction of $900,000 will result in inadequate operation and maintenance of irrigation, power, and related facilities and increase the potential for reduced crop production and power outages, either of which may seriously affect individuals, groups, or communities. Full maintenance of facilities is essential to economical long-term operations and for proper protection of the Federal investment.

The operation and maintenance program will provide for activities on 37 projects or divisions of projects consisting of continuing service for irrigation, power, flood control, municipal and industrial water, and fish and wildlife; con-

tinuance of work on the Colorado River front work and levee system; soil and moisture operations; and halogeton control on Bureau lands.

It is estimated that approximately 90 percent of the operation and maintenance appropriation is reimbursable and will be returned to the Treasury. Water users pay their assessments usually in two installments each year—at the beginning and midway of the irrigation season. Power is billed monthly. Thus, except for a short lag time in receiving power revenues, money is on deposit in advance of the use of appropriated funds. Water user organizations annually examine and approve operation and maintenance programs of irrigation projects.

The nonreimbursable functions representing only about 10 percent of the fiscal year 1961 program include soil and moisture conservation, halogeton control, flood control, and maintenance of the river control works of the Rio Grande and lower Colorado Rivers. These functions must be provided to meet treaty objectives and for protection of life and property.

The operation and maintenance program is for the most part paid for in advance or immediately following service by the user of the service. Although appropriations are required, this essential and largely reimbursable activity does not represent a drain of moneys from the Federal Treasury. Less than adequate operation and maintenance of facilities can only result in more costly future programs.

Under the heading "Construction and rehabilitation" on page 27 of the House report on the fiscal year 1961 public works appropriation bill, in the paragraph headed "Central Valley project," the following appears: "The committee endorses the principle of net billing in the sale and purchase of electric power between the utilities, the preference customers, and the Central Valley project, as outlined during the course of the hearings, with the understanding that the billing will be on a monthly basis." Since this purchase and sale of power is an operation and maintenance activity, which occurs on many projects, provision for net billing should be made applicable to all power projects. Also, the statement should be expanded and clarified to include "wheeling" in the net billing procedure and it should be applicable to all projects. This will allow the Bureau to work out detailed procedures, where possible, for net billing during fiscal year 1961. Where arrangements can be made, a decreased need for appropriated funds for wheeling and to some extent purchase power in future years will result.

BUREAU OF RECLAMATION

Loan Program

(House hearings, pt. 2, pp. 553–558)

Appropriation, 1960	$11, 227, 587
Estimate	18, 437, 000
House allowance	9, 742, 825
Restoration requested	8, 694, 175

(P. 10, line 24, p. 11, lines 1 to 7, inclusive)

AMENDMENT REQUESTED

(1) Page 10, line 24, strike out "$9,742,825" and insert in lieu thereof "$18,437,000"—the estimate, or an increase of $8,694,175 in the appropriation.

(2) Page 11, lines 1 to 7, inclusive, strike out the following language: ": *Provided*, That any contract under the Act of July 4, 1955 (69 Stat. 244), as amended, not yet executed by the Secretary, which calls for the making of loans beyond the fiscal year in which the contract is entered into shall be made only on the same conditions as those prescribed in section 12 of the Act of August 4, 1939 (53 Stat. 1187, 1197)"

HOUSE REPORT

"Appropriation, 1960	$11, 227, 587
Estimate, 1961	18, 437, 000
Recommended, 1961	9, 742, 825
Comparison:	
Appropriation, 1960	−1, 484, 762
Estimate, 1961	−8, 694, 175

"The funds requested under the loan program are for the purpose of implementing the provisions of Public Law 984 of the 84th Congress, authorizing loans for the construction of small irrigation projects, and of Public Law 130

of the 84th Congress which provides for loans for the construction of new distribution systems on Federal projects.

"The budget proposed that the balance of loans, financed in part to date, should be fully financed and that new projects programed for fiscal year 1961 should be financed in full. The committee has previously made it clear that it intends to finance these loans on an annual increment basis rather than on a lump-sum one-time appropriation basis. Accordingly, the budget request has been reduced to reflect this decision.

"The amount provided is distributed as follows:

"LOAN PROGRAM, FISCAL YEAR 1961

Project	*Allocation*
Santa Ynez River Water Conservation District, California	$810,000
Pleasant Valley County Water District, California	1,651,750
Georgetown Divide Public Utility District, California	750,000
Jackson Valley Irrigation District, California	927,000
Weber-Box Elder Conservation District, Utah	302,000
Haights Creek Irrigation Co., Utah	212,000
Donna Irrigation District, Hidalgo County No. 1, Texas	2,050,000
San Benito County Water Conservation and Flood Control District, California	1,420,000
South San Joaquin Irrigation District, California	1,400,000
Administration	220,075
Total	9,742,825"

JUSTIFICATION

Explanation of amendment (1).—The amendment restores the full amount of the $8,694,175 reduction made by the House in the budget estimate. This amount is for the following activity:

Loan program

Appropriation, 1960	$11,227,587
Budget estimate, 1961	18,437,000
House allowance, 1961	9,742,825
Restoration requested	8,694,175

A breakdown of the restoration request by object of expenditure follows:

16 Investments and loans, $8,694,175.—The appropriation requested will make it possible to fully finance the loans included in the fiscal year 1961 program. The normal Bureau practice of making contracts subject to the availability of funds is a handicap when applied to the small projects program due to the difficulty of subdividing the construction work into units that can be adapted to annual appropriation without incurring additional expenses. Furthermore, economies can usually be effected in total project cost if full fund requirements are available so that certain features of a project can be performed at a particular time or season in order that the applicants' needs may be met.

In the event funds are appropriated on an annual basis, provision should be made for transfer of funds between projects or activities within the total appropriation up to the full amount to complete the financing of a loan, if necessary. Advance estimates of annual fund requirements may prove to be inadequate for efficient work in some cases while in other cases the applicants may fall behind schedule and not be able to utilize the funds appropriated for them.

Explanation of amendment (2).—The amendment deletes the proviso added by the House to make distribution system funds available to the borrower after the fiscal year in which the contract is executed contingent on appropriations by Congress. This language is unnecessary with the restoration of full financing of loans requested in amendment (1).

BUREAU OF RECLAMATION

General Administrative Expenses

(House hearings, pt. 2, pp. 549–553)

Appropriation 1960	$4, 290, 000
Estimate	4, 320, 000
House allowance	4, 200, 000
Restoration requested	120, 000

(P. 11, line 12)

Amendment requested:

Page 11, line 12, strike out "$4,200,000" and insert in lieu thereof "$4,320,000", the estimate, or an increase of $120,000 in the appropriation.

HOUSE REPORT

"Appropriation, 1960	$4, 290, 000
Estimate, 1961	4, 320, 000
Recommended, 1961	4, 200, 000
Comparison:	
Appropriation, 1960	−90, 000
Estimate, 1961	−120, 000

"The committee is convinced that a continuing and vigorous review of requirements for the general administration of the reclamation program will reveal areas where minor reductions can be accomplished. In expectation that the Bureau will be successful in efforts along this line, the committee has made a reduction of $120,000 in the budget request."

JUSTIFICATION

The amendment restores the full amount of the $120,000 reduction made by the House in the budget estimate. This amount is for the following activity:

General administrative expenses

Appropriation, 1960	$4, 290, 000
Budget estimate, 1961	4, 320, 000
House allowance, 1961	4, 200, 000
Restoration requested	120, 000

A breakdown of the restoration request by objects of expenditure follows:

01	Personal services	$101, 100
02	Travel	4, 400
03	Transportation of things	500
04	Communication services	1, 700
05	Rents and utility services	100
06	Printing and reproduction	900
07	Other contractual services	1, 900
	Services performed by other agencies	1, 000
08	Supplies and materials	1, 300
09	Equipment	600
11	Grants, subsidies, and contributions	6, 100
13	Refunds, awards, and indemnities	400
	Total	120, 000

The Bureau is requesting an appropriation of $4,320,000 to finance its general administrative expenses during fiscal year 1961. This is an increase of $30,000 over the amount appropriated for 1960. The increase is primarily comprised of the cost of the Federal Employees Health Benefit Act of 1959. After making allowance for the additional cost incident to the health benefit plan the request is practically at the same level as the appropriation for fiscal year 1960.

A reduction of $120,000 below the amount approved by the President would impose a serious handicap upon the Bureau since it would in effect put the allowance for actual administrative functions below the current year's appropriation by the full amount of the reduction. With such a reduction it would not be possible to exercise the kind of supervision and direction over the Bureau's programs that their importance warrants since the present appropriation level provides financing for only essential minimum requirements. With the steadily increasing size of the Bureau's physical plant and with additional projects going into opera-

tion the administrative burden is actually increasing. Only by increased efficiency and the practice of economies, thereby limiting the performance of important functions, will it be possible for the Bureau to hold the line even at the current level of appropriations.

BUREAU OF RECLAMATION

Upper Colorado River Basin Fund

(House hearings, pt. 2, pp. 481–548)

Appropriation 1960	$74,459,775
Estimate	63,100,000
House allowance	61,400,000
Restoration requested	3,500,000

(P. 12, line 11 and lines 12 to 15, inclusive)

AMENDMENT REQUESTED

(1) Page 12, line 11 strike out "$61,400,000" and insert in lieu thereof "$64,900,000", an increase of $3,500,000 in the appropriation.

(2) Page 12, lines 12 to 15, inclusive, strike out the following: "*Provided*, That no part of the funds herein appropriated shall be available for construction or operation of facilities to prevent waters of Lake Powell from entering any national monument".

HOUSE REPORT

"Appropriation, 1960	$74,459,775
Estimate, 1961	63,100,000
Recommended, 1961	61,400,000
Comparison:	
Appropriation, 1960	—13,059,775
Estimate, 1961	—1,700,000

"The funds recommended for the projects and activities covered by this appropriation are distributed as follows:

"State and project	Allocation	
	Construction	Advance planning
COLORADO RIVER STORAGE PROJECT		
Arizona: Glen Canyon unit	$23,535,000	
Colorado:		
Curecanti unit, Blue Mesa and Morrow Point facilities	1,400,000	
Curecanti unit, Crystal Dam and powerplant		$45,730
New Mexico: Navajo unit	11,776,000	
Utah:		
Flaming Gorge unit	12,000,000	
Glen Canyon unit (see Arizona).		
Wyoming: Flaming Gorge unit (see Utah).		
Transmission division	5,318,000	
PARTICIPATING PROJECTS		
Colorado:		
Florida project	750,000	
Paonia project	903,000	
Silt project		95,450
Smith Fork project	1,500,000	
New Mexico: Hammond project	1,300,000	
Utah:		
Central Utah project, Vernal unit	2,189,000	
Central Utah project, initial phase		400,600
Emery County project		107,600
Wyoming:		
La Barge project		53,350
Lyman project		182,520
Seedskadee project	2,000,000	
Quality of water studies		52,750
Subtotal, Upper Colorado River Basin fund	62,671,000	938,000
Less undistributed reduction based on anticipated savings and slippage	—2,209,000	
Total, Upper Colorado River Basin fund	61,400,000	

"REDUCTION IN BUDGET ESTIMATES

"*Glenn Canyon unit.*—An appropriation of $23,535,000 is recommended, a reduction of $3,500,000 in the budget estimate of $27,035,000. This action deletes the funds programed for protection of the Rainbow Bridge National Monument. It has been estimated that the total cost of protecting this bridge would be in the vicinity of $20 million. Access to this national monument will not be affected by the construction of Glen Canyon Dam and Reservoir in fact, it will be improved to some extent. The geological examination report on the problem indicates clearly that there will be no structural damage to Rainbow Bridge by the reservoir waters beneath it. The committee sees no purpose in undertaking an additional expenditure in the vicinity of $20 million in order to build the complicated structures necessary to provide the protection contemplated.

"*Seedskadee project, Wyoming.*—A reduction of $3 million in the budget estimate of $5 million for the Seedskadee project is recommended. At the time of the hearings, it was pointed out that trona deposits underlying the project lands have produced problems of compatibility between irrigation and the mining industry which will substantially delay the awarding of construction contracts to get this project underway. A substantial reduction in the budget estimate was indicated by the Bureau witnesses at that time and even further delays are now anticipated.

"OTHER ACTIONS AND RECOMMENDATIONS

"*Transmission division.*—The committee recommends an increase of $4,800,000 in the amount programed for the transmission division. Testimony before the committee indicates full agreement between all interested parties, private utilities, preference customers, and the Federal Government to the effect that the two main grid lines being funded should be constructed by the Federal Government. These are the 230-kilovolt line from Glen Canyon to Curecanti and the 150-kilovolt line from Flaming Gorge to Oak Creek. It is the committee's understanding that there is now pending in the Bureau of the Budget a supplemental estimate in the amount of $4,800,000 for beginning construction of these two lines.

"LIMITATIONS AND LEGISLATIVE PROVISIONS

"The following legislative provision not heretofore carried in connection with any appropriation bill is recommended:

"On page 12 in connection with the Upper Colorado River Basin fund: '*Provided*, That no part of the funds herein appropriated shall be available for construct on or operation of facilities to prevent waters of Lake Powell from entering any national monument'."

JUSTIFICATION

Explanation of amendment (1).—The amendment restores the full amount of the $3,500,000 reduction made by the House in the budget estimate. This amount is for the following activity:

Statement of House action on appropriation of new funds and amendments requested, fiscal year 1961

Project and activity	Appropriation, 1960	Budget estimate, 1961	House allowance, 1961	Amendments requested, 1961	Total appropriation requested, 1961
Colorado River storage projects:					
Curecanti unit, Colorado		$1,400,000	$1,400,000		$1,400,000
Flaming Gorge unit, Utah-Wyoming	$12,675,000	12,000,000	12,000,000		12,000,000
Glen Canyon unit, Arizona-Utah	43,736,075	27,035,000	23,535,000	$3,500,000	27,035,000
Navajo unit, Colorado-New Mexico	9,696,375	11,776,000	11,776,000		11,776,000
Transmission division	702,000	518,000	5,318,000		5,318,000
Participating projects:					
Central Utah project, Vernal unit, Utah	1,950,000	2,189,000	2,189,000		2,189,000
Florida project, Colorado		750,000	750,000		750,000
Hammond project, New Mexico	292,500	1,300,000	1,300,000		1,300,000
Paonia project, Colorado	3,105,375	903,000	903,000		903,000
Seedskadee project, Wyoming	1,154,400	5,000,000	2,000,000		2,000,000
Smith Fork project, Wyoming	350,500	1,500,000	1,500,000		1,500,000
Advance planning	797,550	938,000	938,000		938,000
Subtotal, Upper Colorado River Basin fund	74,459,775	65,309,000	63,609,000	3,500,000	67,109,000
Undistributed reduction based on anticipated savings and slippage		−2,209,000	−2,209,000		−2,209,000
Total	74,459,775	63,100,000	61,400,000	3,500,000	64,900,000

A breakdown of the restoration request by objects of expenditures follows:

01	Personal services	$450,000
02	Travel	13,000
08	Supplies and materials	389,000
09	Equipment	19,000
10	Lands and structures	2,600,000
11	Grants, subsidies, and contributions	29,000
	Total	3,500,000

Glen Canyon unit, $3,500,000.—Full restoration is requested of the $3,500,000 reduction made by the House.

The $3,500,000 restoration requested is for the start of construction on the Rainbow Bridge protective works at the Rainbow Bridge National Monument to comply with the Colorado River Storage Project and Participating Projects Act.

The purpose of the funds requested is to carry out a definite commitment of the Congress to a large group of American citizens interested in national park protection on the basis of which they withdrew their opposition to the upper Colorado River project.

The commitment is contained in the act of April 11, 1956 (70 Stat. 105) in the following language:

"That as part of the Glen Canyon unit the Secretary of the Interior shall take adequate protective measures *to preclude impairment of the Rainbow Bridge National Monument.*" [Italic supplied.]

Special attention is invited to the italic words "impairment" and "National Monument." These make it clear that the provision of the law is directed not at damage to Rainbow Bridge, but to the impairment of a national monument. The bridge itself must rank in the very trop echelon of the Nation's heritage of natural wonders. It is recognized throughout the world as a unique work of nature. While it is true that waters of Lake Powell will not damage the bridge itself in a structural sense, there certainly can be no doubt whatsoever that its setting will be affected. To permit water to encroach under the bridge would completely change its natural character. Such action would cause silting in the vicinity of the bridge, discolor the rock, and would destroy the natural plant life in the canyon section immediately above, under, and below the bridge. It is true that water would be up under the bridge only part of the time. However, this fluctuation is even more detrimental to the character of the area than if there could be a constant water level.

Over the years, the Congress has given firm and repeated recognition of the fact that dams and impounded waters have no place in the national park system. This is indicated by affirmative action, such as the amendment to Federal Water Power Act of June 10, 1921, which withdrew the national parks from the authority of the Federal Power Commission to permit power developments in Federal lands. Also, in a negative way, the principle has been endorsed by the defeat in the Congress of every attempt to build dams and appurtenant structures in the national park system for the past 40 years. The sole exception was the tunnel under Rocky Mountain which involved no surface impairment of the park. Some of these projects were rejected despite powerful support by influential people and organizations.

Material and irreparable impairment will happen within the national monument if the protective works are not constructed in accordance with the Congressional directive.

This directive of the Congress is an action by due process of law by the Government of the United States in behalf of all future generations of citizens of the United States. An impaired Rainbow Bridge will be a constant reminder that their ancestors failed to meet a clearly stated and clearly understood commitment on the sole basis that a dollar value can be placed on the inspirational resource of one of nature's rarest accomplishments.

For all intents and purposes, the proviso in the appropriation bill precluding the use of funds for construction or operation of facilities to prevent waters of Lake Powell from entering any national monument would constitute an appropriation act amendment of the above-quoted basic legislation.

This work should be started in fiscal year 1961 as it is geared to the Glen Canyon Dam construction program to insure adequate timing of both facilities.

Explanation of amendment (2).—The amendment deletes the proviso inserted by the House prohibiting the use of appropriations to the Upper Colorado River Basin fund for the construction of protective works for the Rainbow Bridge National Monument. This deletion is necessary to permit the use of the funds for which restoration is requested in amendment (1).

BONNEVILLE POWER ADMINISTRATION

Operation and Maintenance

(House hearings, pt. 2, pp. 571–671)

Appropriation 1960	[1] $9, 993, 750
Estimate	10, 975, 000
House allowance	10, 750, 000
Restoration requested	225, 000

[1] Does not include $195,000 appropriated in Second Supplement Appropriation Act, 1960, Public Law 86-424.

(P. 16, line 18)

AMENDMENT REQUESTED

Page 16, line 18 strike out "$10,750,000" and insert inl ieu thereof "$10,975,000" an increase of $225,000 in the appropriation.

HOUSE REPORT

"It is estimated that savings and slippages in the 1961 program will produce a balance of at least $225,000 to compensate for the minor reduction which the committee recommends.

"Revenues of the Bonneville Power Administration are estimated at $78,700,000 for fiscal year 1961."

JUSTIFICATION

The amendment restores the $225,000 reduction made by the House in the estimate. This amount is for the following activities:

Activity	Appropriation 1960	Budget estimate 1961	House allowance 1961	Restoration requested
(a) System operation and maintenance	$8,962,750	$9,670,000	$9,450,000	$220,000
(b) Power contracts and rates	323,000	325,000	325,000	
(c) General administration	903,000	980,000	975,000	5,000
Total	10,188,750	10,975,000	10,750,000	225,000

The restoration request by objects of expenditure is as follows:

01	Personal services	$47,400
02	Travel	1,000
04	Communications	8,700
07	Other contractual services	90,000
	Payment for services performed by the construction appropriation	30,000
08	Supplies and materials	44,500
11	Grants, subsidies, and contributions	3,400
	Total	225,000

The restoration of $225,000 is necessary to avert curtailed operations and postponed maintenance, which result in a lowered level of service and a higher incidence of emergency breakdowns with consequent loss of revenue, adverse customer relations and excessive future capital costs. Specifically, the restoration will be applied to finance the following work which will otherwise be curtailed:

SYSTEM OPERATION AND MAINTENANCE

(a)	Substation operation manning at Tacoma and Portland	$13,500
(b)	Lease of communication facilities for power dispatching	8,700
(c)	Above-ground preservative treatment of 3,800 wood poles	90,000
(d)	Brush and weed control on transmission line rights-of-way	30,000
(e)	Synchronous condenser and disconnect switch maintenance	17,800
(f)	Installation of gear operators on 230-kilovolt disconnect switches	10,000
(g)	Reduction of backlog in electric plant painting	15,000
(h)	Scheduled maintenance of meter, relay and communications equipment	15,000
(i)	Laboratory inspection and repair of retired electrical equipment to make it suitable for reuse on system	10,000
(j)	Transmission system operation studies	10,000
	Subtotal	220,000

GENERAL ADMINISTRATION

(a)	Electronic data processing machine rental costs to meet fiscal service requirements	5,000
	Total restoration requested	225,000

SOUTHWESTERN POWER ADMINISTRATION

OPERATION AND MAINTENANCE

(House hearings, pt. 2, pp. 750–758)

Appropriation, 1960	$1,121,250
Estimate	1,250,000
Recommended	1,200,000
Amendment requested	50,000

(P. 18, line 8)

AMENDMENT REQUESTED

Page 18, line 8 strike out "$1,200,000" and insert in lieu thereof "$1,250,000", the estimate, or an increase of $50,000 in the appropriation.

HOUSE REPORT

"At the time of his appearance before the subcommittee, the Administrator of the Southwestern Power Administration testified that he was required to make 111 regular reports each year to other Government agencies and that in addition during fiscal year 1959 he had 21 special reports to prepare. The work involved constituted 16,327 man-hours of labor and 9 people. The committee finds it difficult to understand how this number of reports could possibly be necessary. Since the bulk of them seem to be required by the Department of the Interior, the committee irects that a study of this problem be undertaekn by the Secretary's office and that the committee be advised as to how the number can be reduced at the earliest practicable date.

"It is expected that the Administrator will apply a major portion of the $50,000 reduction against the costs of preparing reports."

JUSTIFICATION

The amendment increases by $50,000 the amount allowed by the House. This amount is distributed to activities as follows:

Activity	Appropriation 1960	Budget estimate 1961	House allowance 1961	Restoration requested
(a) System operation and maintenance	$731,000	$800,000	$776,000	$24,000
(b) Power contracts and rates	88,000	100,000	100,000	
(c) General administration	302,250	350,000	324,000	26,000
Total	1,121,250	1,250,000	1,200,000	50,000

A breakdown of the amendment by objects of expenditure follows:

01	Personal services	$45,000
02	Travel	2,000
08	Supplies and materials	3,000
	Total	50,000

Restoration of the $50,000 cut by the House is urgently needed to operate and maintain the expanded transmission system in fiscal year 1961.

Despite the number of reports made, the elimination of many of them would not decrease the cost of operation and maintenance as practically every person in the headquarters office spends some time during the year in preparation of them in addition to their regular work.

The operation and maintenance budget for 1961 of $1,250,000 is an increase of $128,750 over 1960.

This increase of $44,000 is required under "System operation and maintenance" for two substation operators to be recruited in 1961 and for an additional line crew to maintain 138 miles of transmission lines from Table Rock to Springfield and from Mansfield-Springfield to Carthage. The hiring of this crew will begin in April of 1960 and will reach full complement in fiscal year 1961. These line crews (four in all) will operate over a total of 1,061 miles of high-voltage transmission lines and are strategically located to perform their duties with a minimum

amount of travel costs. $25,000 of this increase is required for w.a.e. employees and related cost for weed and brush control of transmission lines. In this calendar year precipitation to date indicates an above-average growth. In fiscal year 1960, $45,000 was made available for this purpose on an emergency basis from the continuing fund. Clearing of right-of-way is a continuing operation necessary to prevent outages on the transmission system which result in loss of revenue.

Under "Power contracts and rates," $12,000 of the increase is for employment of a public utility specialist and for filling of urgently needed vacant positions in fiscal year 1961.

In general administration, $47,750, the balance of the increase, provides for financing the administrative staff from the "Operation and maintenance" appropriation for the entire year. $22,000 of this amount was formerly charged to the "Construction" appropriation to carry part of the regular staff and has been allocated herein in 1961. The balance is for the filling of positions in the division of administrative services.

Upper Colorado River Storage Transmission

(Excerpt from S. Doc. 106)

DEPARTMENT OF THE INTERIOR

Bureau of Reclamation

Budget page	Heading	Original estimate	Change to—	Decrease
681	Upper Colorado River Basin fund	$71,600,000	$64,900,000	$6,700,000

On March 10, 1960, a budget amendment (H. Doc. 356) was transmitted to the Congress proposing a decrease of $8,500,000 from the original budget estimate for this appropriation. The proposal herein supersedes that amendment of March 10, 1960, which is canceled.

It is now recommended that the original budget estimate for the Glen Canyon unit be decreased by $8,500,000 as proposed in House Document 356 and in addition that the amount for the Seedskadee project, Wyoming, be reduced by $3 million. The recommendation would also provide an amount of $4,800,000 for the initiation of construction on two transmission lines for marketing power produced at Glen Canyon and Flaming Gorge Dams. The net result of this current recommendation is a decrease in the Upper Colorado River Basin fund of $6,700,000 from the original budget estimate.

The initiation of construction on these two lines in 1961 is necessary to insure that some transmission facilities will be available when power production begins at the Flaming Gorge and Glen Canyon powerplants in June 1963 and June 1964, respectively. Although negotiations between the Bureau of Reclamation and private utility companies on construction responsibilities for transmission lines in the Upper Colorado River Basin are still underway, present information indicates that the two lines proposed for construction would be built by the Federal Government under any circumstances.

Justification for Supplemental Request

The original justification for the transmission division included an item of $518,000 for completion of studies and for discussions with interested parties on the proposed transmission system of the Colorado River storage project. It points out that when final decisions have been reached, preconstruction work including surveys, designs, and right-of-way procurement would be initiated on such line or lines selected for initial construction.

Bureau representatives have recently held meetings with the interested private utility companies, preference users, and interested State agencies on the storage project transmission facilities. In addition, the Bureau has just recently completed an analysis of what an all Federal transmission system might appropriately be. The Bureau's studies, together with the other information at hand, including proposals for construction of transmission lines by utilities in the area, indicate that under any condition certain of the lines would be for Federal construction. These are the Flaming Gorge-Oak Creek 115-kilovolt line and the Glen Canyon-Curecanti 230-kilovolt line. The Bureau should proceed without delay on the

construction of at least these two lines in fiscal year 1961 if they are to be completed by the time power becomes available from the Glen Canyon and Flaming Gorge powerplants. To do otherwise would require a crash-type program. Flaming Gorge is scheduled to begin production in June 1963 and Glen Canyon in June 1964.

Fund requirements for the two lines are as follows:

Glen Canyon-Curecanti 230-kv line	$3,780,000
Flaming Gorge-Oak Creek 115-kv line	1,020,000
Total requirements, fiscal year 1961	4,800,000
Less transfer from Seedskadee project	3,000,000
Net increase fiscal year 1961	1,800,000

With the availability of construction funds in fiscal year 1961, surveys can be completed, designs and specifications prepared, right-of-way procured and contracts awarded on a time schedule that will permit initiation of construction by the spring of 1961. Such a schedule will insure the availability of at least some transmission facilities by the time power at the two plants can be procured.

COSTILLA CREEK STUDY

U.S. SENATE,
COMMITTEE ON APPROPRIATIONS,
June 1, 1960.

Hon. CARL HAYDEN,
Chairman, Senate Committee on Appropriations,
New Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: On April 18, 1960, in Santa Fe, N. Mex., there was held a meeting of the Costilla Creek Compact Commission. In attendance at the meeting were the water users from the Costilla Valley, including communities, organizations, and ditches obtaining water under the compact, and representatives of the States of New Mexico and Colorado and the Bureau of Reclamation.

It was decided at the meeting that it would be desirable to study: (1) The Costilla Dam and Reservoir to ascertain if it can be rehabilitated to allow storing the full 15,700 acre-feet authorized allocation, and (2) the canal system and Eastdale Reservoirs for means of preventing seepage losses, and (3) the diversion works of the main canals.

It is our understanding that the Bureau of Reclamation now plans a reconnaissance investigation. However, because this agreement was reached only recently, it will be unable to program funds for this until fiscal year 1962. This area in New Mexico and Colorado has had substantial and continuing economic problems and this opportunity for improving the economy of the project area merits prompt action, if at all possible. The estimated cost of such a reconnaissance investigation is approximately $30,000 with $15,000 needed during the first year.

Anything that can be done to add the necessary funds for this investigation in the appropriations for fiscal year 1961 will be greatly appreciated by us and our constituents in the area.

Sincerely yours,

GORDON ALLOTT,
U.S. Senator.
JOHN A. CARROLL,
U.S. Senator.
DENNIS CHAVEZ,
U.S. Senator.
CLINTON P. ANDERSON,
U.S. Senator.

UPPER COLORADO RIVER COMMISSION

UPPER COLORADO RIVER COMMISSION,
Salt Lake City, Utah, May 20, 1960.

Hon. CARL HAYDEN,
Chairman, Committee on Appropriations,
U.S. Senate, Washington, D.C.

DEAR SENATOR: We learned only this week that the amount of money ($2,000) included in the budget request for paying the salary and expenses of the Federal representative on the Upper Colorado River Commission is insufficient for activities contemplated for fiscal 1961. It is true that for fiscal 1960 some carryover of the $2,000 appropriation is to be expected. However, this carryover will be due to the fact that our Commission has had only two meetings in fiscal 1960 and no money has been used to pay the expenses of the Federal representative's legal adviser because it was known early in the year that if the ordinary number of meetings were held no money could be made available for paying expenses of a legal adviser.

The funds for Federal representatives on compact commissions are appropriated to the Bureau of Reclamation to pay salary, per diem, transportation, and other expenses. Although the legal adviser to the Federal representative is a member of the Interior Solicitor's staff, reclamation funds are used to pay his per diem, transportation, and other expenses.

As you know, in the Colorado River Basin we will have many problems facing our commission during the next fiscal year. These problems include: Glen Canyon filling, power marketing criteria, power allocations, transmission systems, etc., in addition to our regular business. These problems will require more frequent meetings of the commission and its committees and the services of a legal adviser to the Federal representative.

It would be extremely helpful to our commission if your committee could increase the $2,000 for the salary and expenses of the Federal representative on the Upper Colorado River Commission to $5,000 for fiscal 1961.

Because the Federal representative on the Upper Colorado River Commission occupies a similar position as chairman of the California-Nevada Compact Commission that is currently negotiating an interstate compact between California and Nevada, I had occasion to inquire about the funds in the budget request for his services and expenses in that capacity. The situation there is identical to that described above for Upper Colorado except that there will probably be no balance of funds remaining at the end of fiscal 1960 if another meeting of the California-Nevada Compact Commission is held in June, and a minimum of legal services have been provided in the past year, but not nearly as much as will be needed in fiscal 1961.

I feel sure that an increase of $2,000 above the $2,000 already in the budget request for the Federal representative on the California-Nevada Compact Commission would be much appreciated.

Thanks, very much, for your consideration of this problem.

Sincerely yours,

IVAL V. GOSLIN,
Chief Engineer and Secretary.

GEORGETOWN DIVIDE PUBLIC UTILITY DISTRICT

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D.C., June 1, 1960.

Hon. CARL HAYDEN,
U.S. Senate, Washington, D.C.

DEAR SENATOR HAYDEN: I am contacting you in behalf of the Georgetown Public Utilities District which was granted a loan and an appropriation at the first session of the 86th Congress. They were to receive the remainder of their loan at the second session of the 86th Congress to allow them to construct their project. However, the House Appropriations Committee when marking up the public works bill granted them an appropriation of $750,000 which is now in the bill.

I have been in contact with their engineer, their attorney, and the manager of the district, as well as the board of directors, and in reviewing their contracts that will be awarded this week they are going to need an additional $400,000 bringing this year's allocation, if the Senate could possibly consider it at this time, to a

figure of $1,150,000, that being necessary to take care of the contracts that they will award and the work that will be scheduled prior to July 1 of next year.

I have discussed this matter with Mr. Woodruff and I told him of the problem that the district is facing and he assured me that you would give us consideration if the $750,000 was not going to be enough to allow them to move forward with their project and work schedule.

The district and I would be very grateful if you could see to it that the appropriation was increased to the $1,150,000 which is the actual amount necessary to meet the contract and work schedule that will be let this week, leaving a balance to be appropriated during the first session of the 87th Congress.

Thank you for the past considerations.

Sincerely yours,

HAROLD T. (BIZZ) JOHNSON,
Member of Congress.

RAINBOW BRIDGE NATIONAL MONUMENT,
NATIONAL WILDLANDS NEWS,
Washington, D.C., June 1, 1960.

Senator CARL HAYDEN,
Chairman, Senate Appropriations Committee,
Senate Office Building, Washington, D.C.

DEAR SENATOR HAYDEN: The public works bill, H.R. 12326, will soon come before your committee, I understand, and I should like to say that the editors of the News look to your committee and to the Senate to restore the $3,500,000 requested by the Department of the Interior to begin construction of the protective barriers for Rainbow Bridge National Monument.

As you know, the House committee withdrew the necessary funds, and the whole House sustained this action. We must regard this as a breach of faith, for it was agreed that the upper Colorado River storage bill, in 1956, must contain language giving protection not only to Rainbow Bridge National Monument, but also to other national parks and monuments from encroachment by dams and reservoirs before conservationists would permit it to become law. We hope the Senate will uphold the agreement, and feel sure that, if all members of your committee realize that, unless it does, the national parks and monuments will be open to further similar encroachment.

We do not overlook the deplorable facts that the barrier dams will be extremely costly and that the wild beauty of the canyons in which they are to be built will be marred by construction work. Nevertheless, it seems to us that we are faced with a decision to pay the price in order to see that our magnificent system of national parks and monuments remains intact for all time. We recognize that a violation of principle in one area opens the door to violation in any and all areas. The promoters of big dams are waiting to see Congress forget its duty to the Nation in just one instance, for they know that if that ever happens, they will then be free to construct dams in other national parks and monuments—and several already have been proposed.

Sincerely,

DEVEREUX BUTCHER.

CONCLUSION OF HEARINGS

Chairman HAYDEN. If there is nothing further——

Commissioner DOMINY. I have nothing more, Mr. Chairman. I certainly have appreciated the very fine hearing we have had from your committee.

Chairman HAYDEN. We are very glad to have you here.

This concludes the hearings.

(Whereupon, at 11:30 a.m., Monday, May 23, 1960, the committee was adjourned.)

54770—60——45

INDEX—INDIVIDUALS AND ORGANIZATIONS

A

Page

Aandahl, Hon. Fred G. 43, 536
Achukman, Hon. L. J., mayor, Almena, Kans. 21
Adams, W. E. 23
Adkins, Raymond 23, 24, 26, 27
Ainsworth (Nebr.) Irrigation District 8, 9, 10, 150, 154
Alexander, L. M. 103, 124, 127, 129, 665, 668, 675
Allott, Hon. Gordon 178, 189
Almena (Kans.):
  Chamber of Commerce 21
  Governing body 21
  Irrigation District No. 5 19, 20, 21
American Public Power Association 160
Anderson, Hon. Clinton P. 661
Anderson, Hon. LeRoy 173
Andrews, Mark 277
Arizona Municipal Power Users Association 103, 111
Arizona Public Service Co., Phoenix, Ariz. 665, 675

B

Ball, Hubert 198
Ballard, E. J., Jr. 132
Barnard, John B. 190
Beloit (Kans.):
  Chamber of Commerce 19
  Mayor and city council 19
Bennett, Hon. Elmer F. 401
Bennett, N. B. 262, 269, 319, 398, 411, 437, 453, 487, 511, 516, 524, 531, 629
Bennett, Hon. Wallace F. 658
Berg, Oscar N. 272
Beverlin, Carroll 23
Bible, Hon. Alan 71, 129, 131, 134, 657
Billings Building & Construction Trades Council, Billings, Mont. 169
Billings Chamber of Commerce 160
Blackwell (Okla.) Chamber of Commerce 402
Bloodgood, Grant 607, 617
Bonn, Alfred 61
Bonner, John W. 134, 136
Bountiful City Light & Power 119
Brody, Ralph M. 664
Brooks, Hon. Ralph C., Governor, Lincoln, Nebr. 173
Brown, Allen 189
Brown, Hon. Bert, mayor, Mesa, Ariz. 103
Brown, Hon. Edmund G. 664
Brown, Ray 104
Brunsdale, Hon. C. Norman 255, 260
Bunston, H. W. 169
Burnett, D. R. 262, 269, 270, 290, 291, 319, 402, 403, 405, 437, 531

C

California Water Commission 661
Campbell, D. S. 262, 269, 319, 437, 524, 531
Campbell, Hon. Joseph (Comptroller General, United States) 617, 622
Cannon, Hon. Clarence 171
Cannon, Hon. Paul, Acting Gov., Helena, Mont. 173
Capstick, Earl 21
Carpenter, E. K. 103

Page
Carr, James K. 662
Carroll, Hon. John A. 178, 651
Case, Hon. Francis 433, 436, 441
Cash, Harold 103, 110
Catlett, M. D. 21
Cejka, R. R. 23
Central Iowa Power Cooperative, Cedar Rapids, Iowa 23
Chandler, Fred W 21
Chilson, Hatfield 301
Christian, W. J 242
Citizens Reclamation Committee of Hardin, Big Horn County, Mont 169
Clapper, Louis S 198
Clayton, Albert 23, 28
Coad, Hon. Merwin 229
Colorado River Basin Consumers' Power, Inc 103, 105, 119, 668
Colorado River Commission, Salt Lake City, Utah 134, 135, 178, 180
Colorado River Development Association 678
Colorado River Water Conservation District, Glenwood Springs, Colo 189
Colorado Rural Electric Association, Denver, Colo 103, 107
Colthrop & Malner Investments, Roosevelt, Utah 104
Colthrop, Ned 104
Columbia Basin Commission 155
Cooper, Vernon S 273
Corbell, Victor I 103, 124, 127, 128
Corn Belt Power Cooperative:
Humboldt, Iowa 23, 25
Steamboat Rock, Iowa 24
Cox, Clarence 21
Cramer, I. W 104
Curtis, Hon. Carl T 7, 10, 14

D

Davis, B. G 262, 319, 437, 531
Davis, Hon. John E., Governor, North Dakota 172, 281
Davis, Norton 103, 113
DeWild, John 23
Dickey-Sargent Irrigation District, Cogswell, N. Dak 278
Dickinson, E. J 23
Dodge, Everett 23, 24, 27
Dominy, F. E 262, 295, 301, 319, 343, 398, 406, 409, 411, 418, 425, 437, 444, 448, 451, 458, 468, 472, 475, 487, 489, 495, 510, 520, 531, 538, 543, 550, 554, 556, 563, 568, 572, 579, 580, 593, 597, 600, 603, 606, 622, 626, 646, 648.
Donna Irrigation District, Tex 51, 53, 54
Dworshak, Hon. Henry C 139, 321, 322, 324, 337, 344, 345, 513, 520, 526

E

East Columbia Basin Irrigation District, Othello, Wash 155
Eisenhower, Hon. Dwight D 1
Ellender, Hon. Allen J 469, 473, 476, 481, 487, 490, 494, 495, 500, 512, 516, 521, 524, 660
Ellis, Clyde 139, 146
Engle, Hon. Clair 303
Eugene Water and Electric Board, Eugene, Oreg 183

F

Farmers Electric Cooperative, Greenfield, Iowa 28
Fister, F. G 242
Fletcher, Andrew 183
Florida Water Conservancy District 646
Fraser, Willard E 163
Fredrickson, Fred J 173, 272
Freeman, Hon. Orville L., Governor, St. Paul, Minn 172
Freestone, Bert 103
Frenchman-Cambridge Irrigation District 11, 13

G

Page

Garrison Diversion Conservancy District ... 272
Garrison diversion unit, Governor's coordinating committee ... 276
Glasco (Kans.):
  Chamber of Commerce ... 19
  Governing body ... 19
Godfrey, Murray A ... 61, 499
Golze, A. R ... 262, 269, 319, 423, 437, 531
Goslin, Ival V ... 178, 182
Greater North Dakota Association ... 272
Grainger, William ... 23, 24, 27
Griswold, J. F ... 134
Gubser, Hon. C. S ... 232
Gwaltney, Preston ... 15, 21

H

Hagen, Hon. Harlan ... 68
Hawkins, William W ... 174
Hayden, Hon. Carl ... 1, 7, 10, 12, 15, 23, 24, 32, 44, 48, 49, 60, 71, 132, 139, 146, 154, 158, 177, 183, 185, 189, 193, 195, 197, 201, 220, 223, 226, 231, 241, 249, 253, 255, 258, 264, 267, 303, 312, 322, 343, 398, 411, 418, 433, 441, 444, 448, 451, 453, 458, 468, 472, 475, 479, 487, 497, 510, 520, 531, 536, 543, 550, 554, 563, 568, 572, 579, 600, 603, 606, 622, 626, 638, 646, 648, 656, 661, 665, 675, 678.
Hellen, Wm. R ... 402
Henderson, Herbert ... 44
Henneman, R. G ... 23
Hensley, Bob ... 57
Herseth, Hon. Ralph, Governor, Pierre, S. Dak ... 172
Hickenlooper, Hon. Bourke B ... 22, 23, 24
Hickey, J. J., Gov., Cheyenne, Wyo ... 172
Hidalgo and Cameron Counties Water Control and Improvement District No. 9, Mercedes, Tex ... 50
Hinley, Albert ... 49
Hoeven, Hon. Charles B ... 41, 43
Hoisveen, Milo W ... 280
Holand, Roy A ... 274
Holum, Kenneth ... 23, 45
Hooks, John ... 103
Hoover, Veryl N ... 71, 85, 86
Hutchins, W. Berry ... 103, 104, 119, 121, 675
Hyde, John J ... 23, 24, 28, 30

I

Inter-Mountain Consumer Power Association ... 103, 119, 121
International Brotherhood of Electric Workers, Local Union 57, Salt Lake City, Utah ... 130, 657
Interstate Power Co., Dubuque, Iowa ... 23, 36
Iowa committee, Missouri River power ... 24
Iowa Electric Light & Power Co., Cedar Rapids, Iowa ... 23, 36, 44
Iowa Illinois Gas & Electric Co., Davenport, Iowa ... 23, 36, 44
Iowa Power & Light Co., Des Moines, Iowa ... 23, 36, 44
Iowa Public Service Co., Sioux City, Iowa ... 23, 29, 30, 36, 44, 45
Iowa Rural Electric Cooperative Association, Des Moines, Iowa ... 23
Iowa Southern Utilities Co., Centerville, Iowa ... 23, 36, 44

J

James River Irrigation District ... 279
Jaspers, Ben ... 23, 24, 25
Johnson, Hale ... 18
Johnson, Hon. Harold R ... 195
Johnson, J. Carter ... 166
Johnson, Hon. Lyndon B ... 314
Johnston, Felton M ... 159
Jordam, Oakley ... 103

K

Page
Kapp, Milton 23
Karlsruhe and Middle-Souris Irrigation District 280
Keener, Dr. Rex F 21
Kent, Raymond R 21
Kerr, Hon. Robert S 402, 404
Kilgore, Hon. Joe M 50, 51, 57, 58, 60
Killis, Leroy 103
King, Earl 23
King, R. M 57, 59
Kirkland, Mayor, Safford, Ariz 103
Klein, Arthur 57
Kleinman, H. A 44
Kuchel, Hon. Thomas H 401, 459, 480
Kuljian Corp., Philadelphia, Pa 103, 115

L

L. & O. Power Cooperative, Rock Rapids, Iowa 23
LaFeria Water Control and Improvement District 57, 499
Larson, E. O 97
Larson, Sidney D 531, 597
Leavy, C. W 233, 239
Long, Bill 277
Lucking, Walter 71, 83, 93, 665, 678

M

McAnlis, William 155
McGee, Hon. Gale William 255, 284, 289, 294, 650, 656, 657
McLaughlin, J. F 44
McMullen, R. J 103
McPhail, Harvey F 103, 115, 675
Mansfield, Hon. Mike 255
Mara-San Miguel Electric Cooperative, New Mexico 114
Marble, Fred 171
Martin, Hon. Thomas E 22, 41, 43
Mercedes (Tex.) Water District 50
Mid-West Electric Consumers Association, Aberdeen, S. Dak 23, 45, 49
Middle Rio Grande Conservancy District 198
Middle Rio Grande Flood Control Association 197
Minneapolis (Minn.) Chamber of Commerce 19
Missouri River Power (Iowa Committee) 24
Missouri River States Committee 283
Mitchell County (Kans.) Commissioners 19
Mo-Ark Basins Association 19
Moehler, Herbert 23
Monette, A. L 133
Moon Lake Electric Association, Inc., Vernal, Utah 132
Moss, Hon. Frank E 71, 132, 309
Mumford, Lee 103
Mundt, Hon. Karl E 255, 266, 268, 270
Municipal Utilities, Onawa, Iowa 26
Murphy, John Patrick 197
Murray, Hon. James E 255, 295, 298, 301

N

National Reclamation Association 147, 151, 152
National Rural Electric Cooperative Association 139, 141
National Science Foundation 653
National Wildlife Federation, Washington, D.C 198
Naughton, E. M 71, 72, 86, 97, 98, 665, 668
New Mexico Rural Electric Cooperative Association 113
North Dakota Irrigation District Director's Association 277
North Dakota State Water Conservation Commission 173, 272, 280, 283
North Dakota Water Users Association 272
Norton and Almena (Kans.) Irrigation District No. 5 21

Page

Norton (Kans.):
Chamber of Commerce 21
Chamber of Commerce Water Conservation Committee 19, 21
Governing Body 21
Lions Club 21
Northwest Iowa Power Cooperative, Le Mars, Iowa 23, 24, 27, 29
Nygaard, Mrs. Daphna 276

O

Omaha (Nebr.) Public Power District 29
Onawa Municipal Utilities, Onawa, Iowa 24
Ostrander, E. D 201, 228
Outdoor Life, editor 190

P

Pacific Northwest Utilities Conference Committee 183
Pacific Power & Light Co., Casper, Wyo 71, 86
Palmer, W. I 262, 269, 289, 291, 294, 319, 325, 399, 407, 418, 427, 437, 474, 480, 491, 494, 500, 531, 572, 597, 626, 638, 649
Palo Verde Irrigation District 194
Park, C. Evan 23, 44
Parkinson, K. J 104
Pearson, V. G 130, 657
Perry, Arthur 314
Person, R. T 71, 84, 94
Plains Electric Generation & Transmission Cooperative, Albuquerque, N. Mex 103, 113
Powers, Mr 103
Price, Byron 183
Public Service Co. of Arizona, Phoenix 71, 82, 93
Public Service Co. of Colorado, Denver 71, 83, 94
Public Service Co. of New Mexico, Albuquerque 71, 84, 89

R

Radin, Alex 160
Raun, E. M 23
Ray, Roger V 51
Reeves, D. W 71, 84, 89
Republic Valley Conservation Association, McCook, Nebr 10, 11, 12, 19
Richardson, John 155, 158
Rio Grande, El Paso County Water Improvement District No. 1 65
Rising, E. W 272
Roberts, Dr. Walter Orr 653
Robinson, Charles 141
Ruegamer, Henry S 167, 172, 173
Ruisch, Edward 23, 30, 36, 44
Ryan, M. O 10, 11, 12, 13, 14

S

Saint George City Electric 104
Salt River Project Agricultural Improvement and Power District 124, 132
Salt River Project Agricultural Improvement and Power District, resolution of board of directors 132, 133
Salt River Valley Water Users Association, Arizona 103, 124, 133
Salt River Valley Water Users Association, Arizona, resolution of board of governors 133, 134
Sanchez, Philip N 103, 113, 114
Santa Clara-Alameda-San Miguel Water Authority, California 49
Scheerer, C. A 23
Schmillen, Alfred 23, 29
Schmidt, Mrs. V. R 188
Schoen, Ed 18
Schoeppel, Hon. Andrew F 15, 16, 18, 194
Schroeder, Howard 23
Scott, Howard 103, 107
Seaton, Hon. Fred A 46, 80, 82, 83, 84, 85, 86, 180, 617
Sebelius, Keith G 15, 19, 20, 21

Page
Seitz, Melvin 170
Shaver, A. J 134, 136
Shimek, George 57, 59, 60
Siefkas, Henry 23
Sigler, I. B 51, 55
Silvey, O. B 171
Smith, Floyd 103
Smith, William C., Jr 8, 9, 10
Solomon Valley Citizens Association, Beloit, Kans 19, 188, 193
Solomon Valley Flood Control Association, Beloit, Kans 15, 19
South Crawford Rural Electric Cooperative, Dennison, Iowa 27
Southwestern Federated Power Cooperative, Creston, Iowa 23
Southwestern Montana Stockroads Association 174
Sprenkle, R. J 21
Stamm, G. G 262, 269, 319, 437, 497, 522, 531
Stans, Hon. Maurice H 2
Stephens, Vern E 587
Storm, Joe F 23
Stover, Peter A 23
Stringham, B. H 678
Strunk, Harry D 10
Sturrock, J. E 65, 66, 67, 68

T

Taylor, Ralph 104
Texas Water Conservation Association 65
Thompson, A. Paul 23
Thompson, Don 11
Tremmel, D. H 103
Tri-State Generation & Transmission Association 103

U

Underwood, H. D 195
Upper Colorado Commission 80
Upper Colorado River Preference Users Committee 119
Utah Power & Light Co., Salt Lake City 71, 72, 86, 97, 128, 665
Utah preference users 103

V

Van Pelt, Gerald D 15, 19
Van Wagenen, A 103, 111
Veripps, Arie 23

W

Walters, R. J., Jr 43, 44
Ward, Don D 21
Warwick-McVille Irrigation District 279
Washington State Department of Conservation, Division of Reclamation 155
Waters, R. M 172
Watkins, Hon. Arthur 46
Welsh, William 147
Western Iowa Municipal Power Group 26
White, Albert 169
Wilson, Marion M 103, 105
Wolf, Edward J 59
Woodruff, William W 492
Worth, D. G 201
Wright, D. G 242
Wyoming State Association 103, 110

Y

Yarborough, Hon. Ralph W 61
Young, Hon. Milton R 255, 271, 522

INDEX—BY SUBJECT

[Budget titles are in italic type]

B

Page

Bonneville Power Administration (beginning of hearings) 201
Administrator's statement 201, 220
Construction:
Amendment requested 1
Analysis by activities 202, 217
Appropriation comparisons (chart) 222
Budget justification 201, 205
Construction in progress 3, 206
Construction program summary, 1961 (chart) 203, 204
Fund requirements 206
Funds for use in succeeding years 3
General plant 3
General system facilities 213
Communication facilities 214
General structures and improvements 213, 225
Preliminary engineering studies 216
Tools and equipment, including purchase of motor vehicles and helicopter 214
Less prior year funds 3
Major grid:
Automatic load-frequency control system 205
Big Eddy-McLoughlin, Oreg 206
Columbia-Tacoma transmission line, Washington 207
Cougar-Eugene transmission line, Oregon 207
Hanna substation 208, 224
Hills Creek-Oakridge, Oreg 206
Ice Harbor-Franklin, Wash 206
Longview substation additions 207
Maple Valley substation 208
Portland area supervisory control and digital telemetering 204
Reston switching station, Oregon 207
Rocky Reach-Maple Valley:
No. 1 substation 208
No. 2 substation 208, 223
New construction 3, 206, 223
Obligations by objects 217
Pacific Northwest Utilities Conference Committee, testimony 183
Peak generation capacity additions (chart) 222
Portland area:
Fern Ridge substation 210, 224
Gold Beach substation additions 210, 224
Hampton-Butte substations 210, 224
Lexington area service 210
Other transmission facilities 210
Program for 1961, summary table 203, 204
Public works appropriation bill, fiscal year 1961 3
Seattle area:
East Wenatchee area service 209, 224
Lewis County service 208
Mason County service 209
Oroville area service 209
Other transmission facilities 209

Bonneville Power Administration—Continued
Construction—Continued
Spokane area (lower portion): Page
Harney Electric Cooperative Service 212
North-central Oregon service 212
Other transmission facilities 212
Spokane area (upper portion), other transmission facilities 211
Summary statement of principal 1961 construction, new facilities 223
System electrical facilities 216
Transformer additions 216, 225
Circuit-breaker facilities 216, 225
System reactive facilities 205, 223
Operation and maintenance:
Amendment requested 697
Analysis by activities 217
Budget justification 201, 217
General administration 3, 219
Analysis by activities 219
Budget justification 219
Itemization of estimate 220
Obligations by objects 220
Power contracts and rates 3, 219
Analysis by activities 219
Program summary (chart) 225, 226
System operation and maintenance 3, 218
Analysis by subactivity 218
Reclamation, Bureau of (beginning of hearings) 1
Administrative provisions:
Budget justification 432
Exemption from force-account limitation 431
Purchase of motor vehicles and aircraft 430, 431
Amendment requested 1
Commissioner's statement 262, 319, 437
Construction and rehabilitation:
Advance planning 407, 441, 444
Analysis by activities 439, 440
Budget justification 441, 444
Amendment requested 682
Boulder City municipal fund:
Budget justification 428
Explanation of language change, fiscal year 1961 429
Obligations by objects 429
Construction program:
Budget justification 438
Program schedule, fiscal year 1960–61 528
Disposal of Coulee Dam community:
Budget justification 427
Explanation of change in language, fiscal year 1961 427
Obligations by objects 428
Loan program 64, 303, 308, 663
Amendment requested 691
Budget justification 423
Obligations by objects 424
Donna Irrigation District, Hidalgo County No. 1, Texas 51–56, 62, 319, 424, 425, 426
Georgetown Divide Public Utility District, Calif 424, 426
Haights Creek Irrigation Co., Utah 424, 425, 426
Jackson Valley Irrigation District, Calif 424, 426
Pleasant Valley County Water District, Calif 424, 426
San Benito County Water Conservation and Flood Control District, Calif 232, 424, 426
Santa Ynez River Water Conservation District, Calif 424, 426
South San Joaquin Irrigation District, Calif 424, 426
Weber-Box Elder Conservation District, Utah 424, 426
Projects not in fiscal year 1961 budget 427
Browns Valley Irrigation District, Calif 308
South Sutter Water District, Calif 427
Public works appropriation bill 2

Reclamation, Bureau of—Continued
Construction and rehabilitation—Continued Page
Other permanent appropriations 432
Budget justification 432
Projects:
Boulder Canyon project, Arizona-Nevada 452
Budget justification 453
Central Valley project, California 453
Budget justification 456
Units:
American River division 455, 457
Delta division 455, 457
Friant division 455, 457
Project, general 455, 457
Shasta division 455
Trinity River division 160, 305, 455, 456, 458, 459
Ventura project 460
Chief Joseph Dam project, Greater Wenatchee division, Washington 514
Budget justification 515
Collbran project, Colorado 461
Budget justification 462, 463
Colorado River front work and levee system, Arizona–California 449
Budget justification 451
Columbia Basin project, Washington 155, 342, 517
Budget justification a18, 519
Increase in estimated obligations 520
Crooked River project, Oregon 481
Budget justification 482
Gila project, Arizona 446
Budget justification 446
Welton-Mohawk division 448
Yuma Mesa division 447
Klamath project, Oregon-California 493
Budget justification 493
Lower Rio Grande rehabilitation project, LaFeria division, Texas 62, 318, 495
Budget justification 496
Lower Rio Grande rehabilitation project, Mercedes division, Texas 50, 62, 318, 501
Budget justification 502
McMillan Delta project, New Mexico 470, 660
Budget justification 471
Middle Rio Grande project, New Mexico 197, 474
Budget justification 474
Minidoka project, Idaho (north side pumping division) 464
Budget justification 465
Missouri River Basin (including Fort Peck project):
Budget justification 531
Construction program schedule, fiscal year 1960–61 533
Investigations, budget justification 570
Participating agencies:
Fish and Wildlife Service, Bureau of Sport Fisheries 581, 583, 597
Budget justification 581
Geological Survey 584
Budget justification, statement in support of 1961 budget estimate of Geological Survey-Missouri River Basin project 586
Indian Affairs, Bureau of 586
Budget justification 586
Statement on work to be performed in Missouri River Basin, fiscal year 1961 587

Reclamation, Bureau of—Continued
Construction and rehabilitation—Continued
Projects—Continued
Missouri River Basin—Continued Page
Land Management, Bureau of 588
Budget justification 588
Statement for Senate Subcommittee on Appropriations, 1961 estimate for Missouri River Basin project 588
Mines, Bureau of 589
Budget justification 589
Statement in support of 1961 budget estimate 590
National Park Service 590, 597
Budget justification 590
Statement in support of 1961 budget estimate 592
Transmission division 557
Budget justification 558
Transmission lines 558
Missouri River Basin project (including Fort Peck project) 557
Budget justification 558
Fort Peck-Dawson County 259, 560, 562
Budget justification 560
Iowa 23, 24, 39, 47, 142, 145, 161, 163, 563
Kortes-Cheyenne-Pine Bluffs-Sidney 561
Principal features 559
Sioux City-Denison-Creston 22, 30, 36, 561
Work proposed fiscal year 1961 560
Units:
Ainsworth unit, Nebraska 7, 150, 154, 534
Budget justification 534
Nebraska Supreme Court decision 10, 536
Almena unit, Kansas 11, 13, 16, 17, 536
Budget justification 537
Norton Dam and Reservoir 538
Bostwick unit, Nebraska-Kansas 10, 15, 539
Budget justification 540
Cedar Bluff unit, Kansas 541
Budget justification 542
East Bench unit, Montana 168, 174, 225, 256, 543
Budget justification 544
Clark Canyon Dam 544
Farwell unit, Nebraska 10, 546
Budget justification 546
Sherman Dam and Reservoir 546
Frenchman-Cambridge project, Nebraska 10, 11, 13, 15, 548
Budget justification 548
Red Willow Dam and Reservoir 550
Trenton Dam and Swanson Lake 550
Glen Elder unit, Kansas 16, 17, 18, 19, 188, 194
Glendo unit, Wyoming 550
Budget justification 551
Fremont Canyon 552
Gray Reef Dam 551
Helena Valley unit, Montana 168, 257, 552
Budget justification 168, 553
Helena, Mont., city water 554
Owl Creek unit, Wyoming 555
Budget justification 555
Anchor Dam and Reservoir 555
Webster unit, Kansas 564
Budget justification 565
Yellowtail unit, Montana 47, 142, 154, 160, 163, 165, 169, 257, 284, 295, 566
Budget justification 566

Reclamation, Bureau of—Continued
Construction and rehabilitation—Continued
Projects—Continued Page
Prosser Creek Dam and Reservoir project, Nevada... 444, 466, 468
Provo River project, Utah... 505
Budget justification... 506
Rio Grande, El Paso County Water Improvement District No. 1... 317
Rogue River Basin project (Talent division, Oregon)... 484
Budget justification... 485, 486
San Angelo project, Texas... 61, 317, 503
Budget justification... 504
Spokane Valley project, Washington... 442, 444
Budget justification... 442
Trinidad project, Colorado... 443, 445
Budget justification... 443
Vale project (Bully Creek extension) Oregon... 487
Budget justification... 488, 489
Washita Basin project, Oklahoma... 477, 479
Budget justification... 478
Washoe project, initial phase, Nevada-California... 442, 444, 465
Budget justification... 443, 467, 468
Weber Basin project, Utah... 507
Budget justification... 508, 509
Change in total obligations... 510
Drainage and minor construction program... 64, 158, 569
Budget justification... 569
Senate Joint Resolution 162, 86th Congress, 2d session... 159
General administrative expenses... 268, 420
Amendment requested... 693
Analysis by activities... 421
Budget justification... 421
Obligations by objects... 423
General investigations... 148, 314, 659
Advance planning... 151, 350, 391, 574, 579
Amendment requested... 680
Alaskan investigations... 350, 395, 396
Analysis by activities... 347
Budget justification... 346
Engineering and economic investigations... 347
Basin surveys... 348, 357
Detail by subactivity... 347
General engineering and research... 349, 387
Project investigations... 348, 361
Reconnaissance... 348, 352
Evaporation control... 48, 297, 398
Explanation of difference between obligations in U.S. budget (itemization of estimate) and congressional justification... 398
Investigation of existing projects... 350, 393, 394
Obligations by objects... 398
Projects:
Animas-LaPlata project... 406
Cedar Rapids division... 577
Colorado River Basin (lower part)... 401
Crazy Horse Tower, Greenwood, S. Dak... 575
Garrison diversion unit... 260, 271, 436, 572, 579
Glen Elder unit, Kansas... 16, 578, 580
Goodland project, Oklahoma-Texas... 62, 314
Jefferson unit, Montana... 576
Kanopolis unit, Kansas... 578
Lahohtan Basin survey... 406
Lower Rio Grande rehabilitation project, LaFeria division... 59, 316
Middle Gila project... 403
Narrows unit, Colorado... 579
Oahe unit, South Dakota... 269, 407, 435, 576, 581
O'Neill unit... 407, 571

Reclamation, Bureau of—Continued
General investigations—Continued
Projects—Continued
Page
Prairie Dog Town Fork and Salt Ford of Red River, Texas ... 20, 62, 315
San Felipi division of Central Valley ... 49, 232
Spokane Valley project, Washington ... 442
Texas Basin project ... 62, 315, 405
Umatilla project ... 406
Washoe, Nev.-Calif ... 442
W. C. Austin ... 404
Wheatland unit, Laramie division ... 290, 571
Yankton units, South Dakota ... 575
Trinidad project, Colorado ... 443
Transfers to Fish and Wildlife Service ... 351
Schedule of general investigations program, fiscal years 1960 and 1961 (charts) ... 352, 397
Special foreign currency research program:
Amendment requested ... 681
Budget justification ... 408
Explanation of new language, fiscal year 1961 ... 408
General statement ... 409
Obligations by objects ... 409
Proposed program of work ... 410–412
India.
Israel.
Pakistan.
Poland.
Spain.
UAR (Egypt).
Yugoslavia.
Operation and maintenance:
Amendment requested ... 690
Appropriation allotments and funds, fiscal years 1960–61 ... 414
Budget justification ... 413
Difference between budget estimates and congressional justification, explanation ... 413
Obligations by functions, 1960–61 ... 416
Projects:
Falcon Dam project, Texas ... 62, 317
Rio Grande project, New Mexico-Texas ... 317
Rehabilitation and betterment of existing projects ... 65, 528
Budget justification ... 528
Upper Colorado River Basin fund:
Advanced planning ... 633
Budget justification ... 633
Amendment requested ... 312, 598, 694
Projects:
Colorado River storage project ... 72, 105, 144, 177, 593, 658, 678
Justification ... 593
General statement ... 594
Curecanti unit, Colorado ... 48, 142, 160, 178, 189, 266, 594, 596
Justification ... 598, 634
Emery County project, Utah ... 79, 266, 635
Justification ... 636
Flaming Gorge unit, Utah-Wyoming ... 102, 118, 160, 266, 594, 596, 597, 601
Justification ... 601
Glen Canyon unit, Arizona-Utah ... 116, 160, 266, 309, 594, 596, 606, 660
Justification ... 604
LaBarge project, Wyoming ... 79, 289, 636, 637
Justification ... 636
Lyman project, Wyoming ... 79, 289, 636
Justification ... 637
Navajo Indian irrigation project ... 626, 660
Navajo unit, Colorado-New Mexico ... 594, 595, 596, 625, 660
Justification ... 625

Reclamation, Bureau of—Continued
Upper Colorado River Basin fund—Continued
Projects—Continued Page
Rainbow Bridge National Monument 310, 622, 658
Opposition of Senator Bennett 658
San Juan-Chama project 626, 660
House hearings on S. 72, H.R. 2352, H.R. 2494 626
Silt project, Colorado 79, 637
Justification 638
Merritt-Chapman & Scott Corp., claim for additional compensation under contract of July 5, 1957 607
Letter of April 1, 1960, to Secretary Seaton from Comptroller General, Joseph Campbell, re claim 617
Participating projects:
Central Utah project, Vernal unit, Utah 594, 596, 597, 632, 635, 639
Justification 639
Florida project, Colorado 79, 266, 596, 645
Justification 645
Hammond project, New Mexico 79, 266, 596, 638, 640, 660
Justification 641
Paonia project, Colorado 79, 596, 638, 642
Justification 642
Seedskadee project, Wyoming 79, 266, 596, 646
Justification 650
Statement by Senator McGee 650
Smith Fork project, Colorado 79, 266, 596, 638, 643
Justification 644
Research funds 651
Research accomplishments 654
Statement by Senator John A. Carroll 651
Transmission division 48, 71, 82, 87, 127, 142, 162, 628, 656, 659, 661, 665
Budget justification 628

S

Southeastern Power Administration (beginning of hearings) 233
Administrator's statement 233, 239
Operation and maintenance:
Analysis by activities 233
Budget justification 233, 234
General administration 3, 238
Generating capacity, status current year 242
Itemization of estimate 239
Marketing power 240
Power contracts and rates 3, 236
Projects:
Allatoona 234, 242
Barkley 242
Buford 234, 242
Center Hill 234, 239, 242
Cheatham 234, 242
Clark Hill 234, 240, 242
Dale Hollow 234, 239, 242
Hartwell 242
Jim Woodruff 234, 240, 242
John H. Kerr 234, 239, 242
Old Hickory 234, 242
Philpott 234, 240, 242
Walter F. George 242
Wolf Creek 234, 239, 242
Public works appropriation bill, fiscal year 1961 3
Purchase of energy and wheeling charges 3, 235, 241
Status of generating capacity, current year, January 1960 (chart) 242
Status of revenues 234, 240, 242
System operation and maintenance 3, 234

	Page
Southwestern Power Administration (beginning of hearings)	242
Administrator's statement	242
Construction:	
Analysis by activities	243
Budget justification	243
Construction in progress	3
Itemization of estimate	244
Less prior year funds available	3
New construction	3
Public works appropriation bill, fiscal year 1961	3
Program summary, fiscal year 1961	243
Continuing fund:	
Analysis by activities	247
Budget justification	248
Emergency expense	3
Power purchases, wheeling charges, and rental of facilities	3, 248
Operation and maintenance:	
Amendment requested	699
Analysis by activities	245
Budget estimate, fiscal year 1961	245
General administration	3, 246
Itemization of estimate	247
Obligations by objects	247
Power contracts and rates	3, 246
System operation and maintenance	3, 245

O

Page
242
242

243
243
3
244
3
3
3
243

247
248
3
248

699
245
245
246
247
247
246
245